

**Dynamic Constructed Climate Change  
Discourses and Discourse Networks across  
Newspapers in China around Three Critical  
Policy Moments: A Comparative Study of  
*People's Daily*, *China Daily*, and *Southern  
Weekend***

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# Abstract

With the rapid growth of economy and carbon emissions, China has been seen as having a key role in addressing climate change and receives substantial attention from the media. In the Chinese coverage, climate change issues can be interpreted as various concerns and ideas involving the dimensions of the economy, energy and emissions, public involvement, science and ecology, and responsibility. In this sense, a discourse approach can be used to understand how the newspapers construct the climate change discourse and discourse networks in the coverage. This study selects three different newspapers in China, namely *People's Daily*, *China Daily* and *Southern Weekend*. Also, it identifies three critical policy moments for observing changes in climate change discourses of China, namely the release of *China's National Climate Change Programme* on 4<sup>th</sup> June, 2007, the announcement of China's positions on the Copenhagen Climate Change Conference on 26<sup>th</sup> November, 2009 and the submission of China's Intended Nationally Determined Contributions (INDCs) to the United Nations Framework Convention on Climate Change (UNFCCC) on 30<sup>th</sup> June, 2015.

This PhD thesis makes a primary contribution to academic studies through the application of an interpretivist discourse network approach to understanding the constructed climate change discourses in the newspapers in China. This approach employs storylines, actors and discourse network to analyse the constructed discourses. Actors are seen as news sources cited in the newspapers, and storylines refer to various statements concerning the issues identified in the coverage. Also, it contributes to existing knowledge of climate change politics and coverage of China, dynamic environmental discourses and social constructionist approach.

This thesis identifies three dominant discourses constructed in the climate coverage, namely development, ecological modernisation and low carbon, which have been rising and falling in their prominence in different ways across the newspapers in China.

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This PhD thesis is dedicated to the memory of my grandfather, WANG Wenzhong. He is the most important person in my life, and his spirit inspires me to live my life to the fullest.

## List of Abbreviations

APEC	Asia-Pacific Economic Cooperation
CAS	Chinese Academy of Sciences
CASS	Chinese Academy of Social Sciences
CCCLSG	National Climate Change Coordination Leading Small Group
CCPPD	The Chinese Communist Party Publicity/Propaganda Department
CCS	Carbon capture and storage
CDM	Clean Development Mechanism
CER	certified emission reductions
COP	Conference of the Parties
CSR	Corporate Social Responsibility
DNA	Discourse Network Analysis
EM	ecological modernisation
EU	European Union
FDI	foreign direct investment
FWCC	First World Climate Conference
G8	Group of 8
G20	Group of 20
G77	Group of 77
GAPP	General Administration of Press and Publications
GDP	Gross Domestic Product
GHG	greenhouse gas
INDC	Intended Nationally Determined Contributions
IPCC	Intergovernmental Panel on Climate Change
MEP	Ministry of Environmental Protection
MOFA	Ministry of Foreign Affairs
MOST	Ministry of Science and Technology
NCCCC	National Coordination Committee on Climate Change
NDRC	National Development and Reform Commission
NEPA	National Environmental Protection Agency
NGO	Non-governmental organisation
NLGCC	National Leading Group on Climate Change
NPC	National People's Congress



NPF	Narrative Policy Framework
OECD	Organisation for Economic Co-operation and Development
SEPA	State Environmental Protection Administration
SOE	state-owned enterprises
SPPA	State Administration for Press and Publications
TVE	township and village enterprises
UN	United Nations Educational, Scientific and Cultural Organisation
UNCHE	United Nations Conference on the Human Environment
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WCED	World Commission on Environment and Development
WWF	World Wide Fund for Nature

## **Chapter: Introduction**

This thesis is about dynamic constructed climate change discourses and discourse networks across three Chinese newspapers namely *People's Daily*, *China Daily* and *Southern Weekend* around three critical points, namely the release of *China's National Climate Change Programme* on 4<sup>th</sup> June 2007, the announcement of China's positions on the Copenhagen Climate Change Conference on 26<sup>th</sup> November 2009 and the submission of China's Intended Nationally Determined Contributions (INDCs) to the United Nations Framework Convention on Climate Change (UNFCCC) on 30<sup>th</sup> June 2015. The constructed discourse means that the newspapers can discursively construct climate change issues in the coverage. This chapter begins with the importance of understanding dynamic climate change discourse and discourse networks constructed in the newspapers in China. It also discusses my academic contribution to knowledge and states the research gap. The chapter then states the main aims of this PhD thesis. In addition, it shows the research questions and expectations. As a qualitative piece of work, situated in a social ontological and social epistemological position, this thesis uses the term 'expectations', rather than 'hypotheses' or 'assumptions', to anticipate particular findings. Finally, this chapter outlines the structure of the thesis.

### **Empirical research puzzle**

#### **Why climate change issues?**

According to *the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, human activities, particularly those resulting in greenhouse gases emissions, are extremely likely to be the main cause of climate change, which has generated negative effects on natural and ecological systems (IPCC, 2014). Certainly, climate change is an unprecedented crisis in the world. Since the First World Climate Conference (FWCC) in 1979, the world has witnessed the 1992 Rio Earth Summit, the creation of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, the establishment of the Kyoto Protocol in 1997, the 2009 Copenhagen Summit and the 2015 Paris Climate Agreement. While global efforts and desires for climate change mitigation have been increasing, the consensus on global collective and substantial action remains vague. On the one hand, the achievement of the

Paris Agreement witnessed wide participation of stakeholders including industrialised nations and emerging economies such as China and India in terms of addressing climate change. On the other hand, the US President Trump declared withdrawal from the Agreement. Being an important discursive space, Chinese newspapers can show how journalists engage in a dynamic process of discursively constructing climate change issues in China.

### **Why China?**

There are several reasons that it is worth focusing on China in addressing climate change issues. Firstly, China has become the biggest greenhouse gas (GHG) emitter surpassing the US especially after 2005 (WB, 2016b). Without China's proactive and substantial participation, international society would fail to achieve global action to address climate change (Harris et al., 2013 p. 292). Secondly, despite its huge population, China's per capita emissions even surpassed the global average level in 2008 (Harris, 2010) and nearly reached the level of the EU in 2012 (Schreurs, 2016 p. 222). Thirdly, with its rapid economic growth, China has become a key emerging economy and plays an important role in global governance. China has to undertake more responsibility and bear international pressure for global climate mitigation. While a broad range of existing studies focus on climate change institutions and governance of China, it is very important to understand how the nature of climate change issues has been interpreted in China dynamically (see Chapter 1). Also, it is very important to analyse how Chinese newspapers construct these climate-related issues in their coverage.

### **Why three critical policy moments?**

The identification of three critical policy moments is based on the three significant objectives for addressing climate change of China (see Chapter 1). *China's National Climate Change Programme* released on 4<sup>th</sup> June 2007 includes the first target of reducing the energy intensity of China, which indicates the initial recognition of climate change on China's political agenda (Hallding et al., 2009 p. 49). China's positions on the Copenhagen Climate Change Conference announced on 26<sup>th</sup> November 2009 shows the first target of reducing the carbon intensity of China, which reflects China's positive attitudes towards attending the conference (Foot and Walter, 2010 p. 193). The submission of China's Intended Nationally Determined Contributions (INDCs) to

the United Nations Framework Convention on Climate Change (UNFCCC) on 30<sup>th</sup> June 2015 signifies China's resolutions to control coal consumption and reach a carbon peak by 2030 (Schreurs, 2016 p. 222, NDRC, 2016). These three policy moments indicate the milestones of addressing climate change in China. Therefore, it is very important to understand how constructed climate change discourses in the media evolve around these critical points in China.

### **Why newspapers?**

This PhD thesis employs newspapers as a platform for observing the evolution and interaction of constructed climate change discourse in the media and policy rhetoric. The choice of newspapers for analysis is consistent with the nature of the Chinese political and media systems, which are owned and controlled by the Chinese government and the Communist Party of China. Policy rhetoric can be constructed in the Chinese media rather than just in governmental documents. With the media reforms, newspapers in China can show various discourses of climate change (Yang and Calhoun, 2007 p. 221, Yang, 2005 p. 56, Stockmann, 2011). Compared with TV and broadcasting which is strictly controlled by government and the Internet which is strongly influenced by business actors, newspapers are controlled at a moderate level by the Chinese government (Zhao, 2004 p. 194, Stockmann, 2013 p. 63). In order to reflect the Chinese political and media systems, three different newspapers in China, *People's Daily*, *China Daily*, and *Southern Weekend*, are selected for observing the evolution of constructed climate change discourses and policy rhetoric in the coverage. The reasons for selecting these newspapers are presented in Chapter 2. The thesis expands on existing literature that focuses on climate change journalism and content analysis of the coverage (see Chapter 2).

## **Theoretical research puzzle**

### **Why constructed discourses and discourse networks?**

This PhD work focuses on how the newspapers construct climate change discourses and discourse networks identified in the coverage. Scollon (2014 p. 6) uses the term 'mediated discourse' to look at social interaction between the media and news events. However, Carvalho (2008 p. 164) uses the term and provides a more specific approach to understanding how the media cite various news sources and construct discourses. In order to show climate change

discourse and discourse networks identified in the coverage, my thesis focuses on discovering how the newspapers construct discourses and cite various news sources in the climate coverage in China. First of all, this work borrows main elements namely storylines, claim-makers and discourses from the concept developed by Hajer (1995). It does not reflect a political reality and political networks such as discourse coalitions.

Secondly, this work borrows the ideas of discourse network approach developed by Leifeld (2012). This approach has been widely used in mapping actors, statements and discourse networks particularly constructed in newspapers.

Thirdly, there is a wide range of existing literature on exploring how the newspapers construct discourse networks in the coverage (Wagner and Payne, 2017 p. 15, Kukkonen et al. 2017, Hovardas, 2017 p. 5, Metze and Dodge, 2016) (see Chapter 4). Particularly, there is large research project called Comparing Climate Change Policy Networks (COMPON) mapping actors cited in making discourse identified in newspapers in 19 countries (Broadbent et al. 2016). Also, this work employs a social constructionist perspective for understanding the constructed climate change discourse and discourse networks of the newspapers. Therefore, my thesis uses the notion 'constructed discourse networks' to demonstrate how the newspapers construct climate change issues.

### **Why climate change discourse?**

In terms of environmental discourse, there are a great number of studies in this area ranging from those focused on the appreciation of nature, environmental policy, cultural politics, to power and knowledge (Hajer and Versteeg, 2005 p. 181, Hajer, 1995 p. 49, Dryzek, 2013 p. 201). However, the wide range of literature lacks study of dynamic environmental discourses. As Spector and Kitsuse (1973 p. 146) demonstrate, social problems should be dynamic processes rather than static situations. Therefore, by observing climate discourse this study is useful for understanding the social construction of climate change issues via discourse in the newspapers (see Chapter 3). Also, the majority of studies on environmental discourses have been conducted in Western countries. Due to the rising status of China in international climate

change governance, it is therefore necessary to study dynamic constructed climate change discourses in the coverage in China.

For the purposes of this thesis, climate change discourses are defined as five dimensions of climate-related topics in China, namely economy, energy and emissions, public involvement, science and ecology, and responsibility. This study looks at the dynamic process of constructed climate change discourses within these five dimensions in the coverage. Chapter 1 reviews existing studies on economic priority, energy conservation and emissions reduction, environmental concerns, international climate negotiations and major social stakeholders in terms of addressing climate change in China. Chapter 5 explains specific storylines, including statements, ideas and concepts, across these five dimensions in the constructed climate change discourses in newspapers in China.

### **Why social constructionism?**

This PhD thesis employs a social constructionist perspective of understanding how the newspapers discursively construct climate change issues and cite the various actors in the coverage. Social constructionism involves two fundamental theoretical considerations: social ontology and social epistemology (see Chapter 3). In terms of ontology, this research sees the nature of the social world as a subjectively created one (Halperin and Heath, 2012 p. 49). Social phenomena and their interpretations can be socially constructed by a process of socially interacting and changing (Bryman and Teevan, 2005 p. 13). In terms of epistemology, the scientific knowledge of the social world can be interpreted by giving meanings to social phenomena (Halperin and Heath, 2012 p. 49). In this sense, climate change issues are socially constructed by the newspapers via discourses. Also, various social actors are cited as news sources in the coverage and being linked to the storylines and discourses constructed in the coverage by the newspapers. Therefore, this thesis employs a social constructionist perspective of understanding the dynamic constructed climate change discourses in the coverage across three newspapers that have varying levels of governmental control.

## **Why Discourse Network Approach?**

My thesis employs a discourse network approach developed by Leifeld (2010b) mapping the relationships between storylines and actors cited in the climate change discourses (see Chapter 3 and 4). This has been widely used as an approach to understanding links between actors and statements and exploring and visualising discourse networks (Leifeld and Haunss, 2012 p. 383, pp. 401-402, Muller, 2015 pp. 378-383, Di Gregorio, 2012 p. 4). The various actors are seen as the news sources cited in the climate change coverage. This PhD study borrows key elements from the discourse-coalitions approach developed by Hajer (1995) but applies them to discourse in newspapers only (see Chapter 3). The key elements include storylines, claim-makers and dominant discourse. Firstly, storylines refer to ideas, concepts and statements concerning complex issues (Hajer, 2006 p. 69, Smith and Kern, 2009 p. 81). Secondly, claim-makers are identified as the actors making sense of the issues via storylines (Hajer, 1995, Metze and Dodge, 2016 p. 3). My PhD research looks at the way in which newspapers cite these actors as news sources and construct them and those storylines into discourse networks in the coverage. Thirdly, discourse contains a set of storylines. And, my work reveals discourse networks constructed in the coverage by identifying how newspapers link a group of actors to the same set of storylines. However, it is important to note that this PhD study departs from Hajer's approach by focusing on the dynamic constructed climate discourse identified and various actors cited in newspapers coverage rather than as a reflection of political reality. In this sense, by borrowing main elements of the approach to reveal the representation of various actors cited in the coverage and their links to storylines constructed in the coverage, my PhD work maps constructed discourse networks rather than mapping discourse coalitions in real politics. Also, it identifies the dominant constructed discourse networks in the climate coverage by observing links between a majority of governmental actors and storylines in the newspapers rather than revealing the institutionalisation of the discourse in political arrangements. Therefore, this PhD research reveals constructed discursive institutionalisation in the climate coverage by identifying how the three newspapers construct the dominant discourse and discourse networks around the critical moments.

## **Contribution to knowledge and the research gap**

Primarily, the main contribution of the thesis is to the literature on environmental discourses and discourse networks. It also provides links to other literatures, most notably climate change politics and discourse in China, and social constructionist approaches. It draws on the weakness in previous studies on climate change coverage in China.

Because of the lack of research into the subject of making discourses, a wide range of previous literature fails to demonstrate how various actors are constructed in the dynamic process of newspaper discourses. In this sense, this PhD thesis makes a contribution to constructed climate change discourses and constructed discourse networks revealing links between various actors and storylines represented in the coverage (see Chapter 3 and Chapter 4). The constructed discourse networks employed in this thesis consist of storylines constructed in and social actors cited in the coverage. Theoretical applications in different political contexts are considered with regard to theoretical travelling from Western countries to the rest of the world (Sabatier et al., 2005 pp. 11-19). Existing studies on mapping actors and environmental discourses have been conducted in the UK and the Netherlands (Hajer, 1995) and climate change politics in Australia (Bulkeley, 2014, Bulkeley, 2000). These studies only focus on Western liberal democratic countries, and do not include other political systems. Therefore, this thesis uses the discourse network approach and borrows key elements from the discourse-coalition approach to understand the ways in which newspapers construct climate change discourses in an authoritarian political system like China. This PhD thesis makes a contribution to understanding the theoretical travelling of the discourse network approach from Western democratic countries to authoritarian countries, i.e. whether such theory can 'travel' between these contexts. Also, it is important to understand how the newspapers construct climate change discourses and discourse networks in the coverage.

There are multiple studies on climate change politics in China (see Chapter 1). They focus on a range of climate change issues including economic concerns (Harris and Yu, 2005 pp. 49-50, p. 55, Lewis, 2007 pp. 155-158), energy security (Lewis, 2007 pp. 155-158, Bina, 2011 p. 47), political capacity (Lieberthal et al., 2009 pp. 30-32), political stability (Wiener, 2008 pp. 1818-



1821), vulnerability to climate change (Held et al., 2011 p. 10, Heggelund, 2007 p. 155), environmental protection (Chmutina, 2010 p. 3), and international pressure and cooperation (Hatch, 2003 p. 44). Based on a deep discussion of these views, this thesis includes a literature review of climate change politics in China. These views attach great importance to Chinese climate change politics from the realist and neoliberal perspective. However, there is an evident lack of a social constructionist perspective to understand the constructed climate discourses of China in the newspapers.

Notably, social problems are not a cluster of static social conditions and situations but a development of collective definitions (Spector and Kitsuse, 1973 p. 146). In terms of the social construction of environmental issues, there are several important studies on the defining process. Wiener (1981) points out that the process of defining environmental problems contains three steps, namely animating, legitimizing and demonstrating the environmental problem. Solesbury (1976) describes the process of defining the environmental problems with commanding attention, claiming legitimacy, and invoking actions. Having combined these differed steps of constructing environmental problems, the process is summarized into three tasks, namely assembling, presenting and contesting (Hannigan, 1995 p. 42).

However, the existing literature reduces complicated environmental problems and climate change issues to the simple process of definition. Those studies of social construction fail to make a contribution to the understanding of the complicated process of making sensing climate change issues. The process involves various actors and different concerns about the issues.

There are some studies focusing on environmental (Tong, 2015 p. 49) and climate change discourses in China (Ellermann, 2013 p. 5, Eberhardt, 2015 p. 49). Also, there are some studies on the frames of climate change in the Chinese media (see Chapter 2). The existing studies on climate change coverage emphasise the strategy and scope of media reporting (Xie, 2009 p. 17), the comparison of frames between Chinese and other countries' media (Xie, 2009 pp. 24-25, Wu, 2009 pp. 165-171, Yi-jun et al., 2011 pp. 6-7), and the role of the media in agenda-setting (Wübbeke, 2011 pp. 19-20). However, existing research ignores the various actors and their links to storylines

constructed in the newspapers. More importantly, the majority of studies focus on climate change journalistic practices and content analysis of the coverage. Little academic research pays attention to discovering how climate change issues have been discursively constructed in the newspapers. In particular, there is very little academic research involved in establishing the relations between various actors cited as news sources and the constructed climate discourse in the coverage of China.

Therefore, in order to bridge the gap in the literature between environmental discourse and discourse network analysis, the social constructionist perspective, Chinese climate change politics and discourse, and climate change media studies, this thesis focuses on the study on dynamic constructed climate change discourses and discourse networks in the newspapers and their similarity to and difference from climate policy rhetoric in China.

## **Aims**

This PhD research aims to identify and explain the dynamic processes of the constructed climate change discourses and various actors cited in the coverage across three newspapers in China. The central argument of this thesis is that the three newspapers have discursively constructed climate change issues and cited various actors in the climate coverage in different ways depending on the level of governmental control. It identifies three dominant constructed discourses, namely development, ecological modernisation and low carbon in China and reveals how they have been constructed to become dominant and how some have then faded away over time. These three constructed discourses contain various storylines concerning a wide range of climate-related issues and concepts. By using Discourse Network Analysis (Leifeld, 2010b), this research maps the links between various actors and storylines constructed in the coverage and discovers how the newspapers construct the discursive participation of various social stakeholders in the climate coverage. More importantly, this study selects three critical points in 2007, 2009 and 2015 respectively as they indicate three significant objectives of addressing climate change (see Chapter 1). It therefore observes dynamic dominant discourses and their storylines constructed in the coverage (see Chapter 5), identifies and explains the main actors cited as news sources in the coverage (see Chapter 6) and compares changes in dominant constructed discourses and discourse

networks between the critical points and between newspapers (see Chapter 7). Discursive structuration refers to how storylines and various actors are cited as news sources in the coverage. Discursive institutionalisation refers to how storylines and governmental actors have been constructed and cited in the climate discourse of the newspapers and their links to the policy rhetoric in governmental documents.

## **Research questions and expectations**

Based on the discussions above, there are research questions and expectations. The term ‘expectations’, rather than ‘hypotheses’ or ‘assumptions’, is used in this thesis because it is designed to be consistent in a social ontological and social epistemological position (see Chapter 3). This position requires a qualitative and interpretivist research design rather than a quantitative one with a causal mechanism. There is a concern that the terms ‘hypotheses’ or ‘assumptions’ indicate a strong position in establishing empirical tests and causal links within discourses. Therefore, my PhD thesis uses the term ‘expectations’ for exploring and understanding findings. The research questions and expectations are as follows:

The central research question is:

- How have climate change issues been discursively constructed and various actors been cited in newspapers in China at critical points over time?

The central question is designed to explore the dynamic processes of the newspaper’s social and discursive construction of climate change issues. It focuses on revealing the constructed discourse networks which contain various constructed storylines and a wide range of social actors cited in *People’s Daily*, *China Daily* and *Southern Weekend* around the critical policy moments in 2007, 2009 and 2015.

Key sub-questions are:

- Do the dominant constructed climate change discourses identified in the coverage vary across newspapers? If so, what are they? In what way do they vary?

The identification of dominant constructed climate change discourses in coverage depends on revealing the dominant discourse networks constructed

across the three different newspapers. The dominant discourse must be constructed to be linked to a wide range of news sources and particularly key governmental sources cited in the coverage.

- To what extent have various actors been cited and particularly been selected to derive the legitimacy of governmental positions in climate coverage across the three newspapers?

This question is designed to uncover how the newspapers discursively construct the representation of a wide range of actors cited in the climate change coverage. Also, it discusses how non-state actors such as non-governmental organisations (NGOs) and international organisations have been cited to compete with and support governmental discourses constructed in the coverage.

- How have constructed climate change discourses been structured in the coverage across newspapers?

This question refers to an exploration of constructed *discursive structuration* revealed in the climate coverage (see Chapter 3). It can show how the newspapers have constructed links between various storylines and a wide range of actors cited in the constructed discourse networks in climate change coverage.

- How have constructed climate change discourses been institutionalised in the coverage across newspapers?

This question refers to an exploration of constructed *discursive institutionalisation* revealed in the climate coverage (see Chapter 3). It can show how the newspapers have constructed links between various storylines and the key governmental actors cited in the constructed discourse networks in the climate change coverage.

- What are the similarities and differences between the constructed climate change discourses in newspapers and the climate policy rhetoric?

This question refers to a discussion on how the policy rhetoric can be identified in the constructed climate change discourse in newspapers. While this thesis does not look at establishing causal links between the constructed climate discourses and policies, it focuses on comparing the similarities and differences between the constructed climate change discourses in the climate coverage and policy rhetoric.

- How and why do the three different newspapers construct climate discourse networks differently?

Given the different features of *People's Daily*, *China Daily* and *Southern Weekend*, the nature of constructed climate change discourse networks can vary across the three newspapers. The dominant constructed discourses can evolve in different ways across the newspapers.

The expectations are as follows:

- Constructed discourse networks contain a wide range of different actors cited in with various storylines identified across newspapers.
- The dominant constructed climate change discourse identified in the coverage has been changing at critical points over time in newspapers in China.
- A dominant constructed discourse network contains storylines and their links to various actors particularly the key governmental actors cited in the coverage. The newspapers can construct different features of the dominant constructed discourse networks identified in the coverage.
- *People's Daily*, being the tightly controlled state mouthpiece, changes the constructed climate change discourses in the coverage in line with the policy rhetoric over time.
- *China Daily*, being the more open official newspaper, develops the constructed climate change discourses to some degree around the policy rhetoric over time.
- *Southern Weekend*, being the open and commercialised newspaper, shows its changes in constructed climate change discourses which are not directly relevant to the policy rhetoric over time.

## **The structure of the thesis**

Chapter 1 explains the background of climate change politics and governance of China. This chapter involves the trajectory of China's engagement in international governance and domestic institutional development in terms of addressing climate change. Also, this chapter demonstrates the various dimensions of climate change issues of China including the economy, energy and emissions, environmental concerns, international factors and major actors of climate change governance. It identifies three critical climate policy moments.

Chapter 2 provides a systematic review of climate change journalism and media studies. It also critically reviews the existing research on climate coverage and discourses in China. Finally, it demonstrates why newspapers are employed as the main data sources and why *People's Daily*, *China Daily* and *Southern Weekend* are selected.

Chapter 3 selects social constructionism as a theoretical framework, critically reviews academic discussions on ontological and epistemological considerations, and introduces the discourse approach taken. The employment of social constructionism is used to understand how the newspapers make sense of climate change issues via discourses and represent various actors as news sources in the coverage. This is not to deny the existence of climate change but to recognise the process of social construction of issues through interpretation. Also, this chapter focuses on the theory of environmental discourses and a discourse network approach. This chapter creates a basis for defining environmental discourse and studying constructed Chinese climate change discourse in newspapers through a comprehensive literature review. It stresses the dynamic and multi-actor nature of discourses constructed in the coverage across the three newspapers in China.

Chapter 4 refers to a discussion of the methodology. This thesis employs discourse network analysis (DNA) to understand the evolution of constructed climate discourse and the emergence of constructed discourse networks identified in the coverage in China. The discourse network approach requires the identification of actors and a set of storylines in the constructed discourses. In this thesis, identifying actors cited as news sources, and a set of constructed storylines, in the climate coverage can reveal how the newspapers have discursively constructed climate change issues and formed the constructed discourse networks. The use of Discourse Network Analyser software helps visualise actors, storylines and constructed discourses (Leifeld, 2012).

Chapter 5 identifies three main discourses constructed by the newspapers, namely development, ecological modernisation and low carbon. These three constructed discourses contain different storylines concerning climate change issues in China. This chapter explains the categorisation of these storylines and

the constructed discourses. Also, it shows the rise and fall of these constructed discourses over time in the newspapers.

Chapter 6 focuses on the citation of various actors linked to the storylines and discourses constructed in the climate change coverage in *People's Daily*, *China Daily* and *Southern Weekend*. It discusses how different newspapers cite the various actors as news sources in the climate coverage, demonstrates the frequency of citation of main actors and identifies and compares the key actors and their discourses identified from their documents.

Chapter 7 looks at changes in storylines, discourses and discourse networks constructed around these critical points in the newspapers. This chapter shows the evolution of the constructed climate change discourses across the newspapers and climate policy rhetoric at these critical points. Also, this chapter shows how the newspapers have constructed links between various storylines and a wide range of actors particularly governmental bodies cited in the coverage in different ways. In this sense, this chapter compares the changes in the constructed discourse networks across the critical moments and their differences between the three newspapers.

Chapter 8 discusses responses to the research questions systematically. It links to previous chapters and relevant studies. It discusses how this PhD thesis, based on its key findings, confirms and/or challenges the existing knowledge about constructed climate change discourses in China. Also, it states how this PhD research makes a contribution to the academic development of studies on climate politics in China, social constructionism, environmental discourses and discourse network approach, climate coverage and the nature of newspapers in China.

The Conclusion provides an overview of the structure of this thesis, summarises the main findings and demonstrates its contributions to the understanding of climate politics and the media discourses of China. It also shows the limitations of this PhD research in terms of research methods and comparative studies, and finally it forwards some future directions for research on climate change politics using social media as data sources.

# **Chapter 1: Climate change politics and discourse of China**

With its rapid economic growth and rising power in the international stage, the role of China in climate change issues has changed from a marginal player to a significant actor. China, being the biggest greenhouse gases emitter, is required to undertake greater responsibility for reducing its carbon emissions since it became a major consumer of coal, accounting for nearly half of the total consumption around the world (Harris, 2011 pp. 6-7, McMullen-Laird et al., 2015 p. 2). In terms of China's engagement in domestic and international efforts to address climate change, China made a tough decision to confront climate change issues through making relevant policies and establishing an ambitious goal of emissions reduction. Therefore, this chapter explains the general background of the climate change politics of China. It discusses climate change issues involving economic development, energy and emissions, environmental concerns, international factors and major actors. Finally, it identifies and discusses the three policy moments and documents.

## **1.1 The trajectory of climate change politics of China**

### **1.1.1 The development of China's climate change institutions**

In 1984, the State Council set up the State Environmental Protection Commission which was considered a leading body responsible for coping with environmental problems. In 1988, the National Environmental Protection Agency (NEPA) was established (Qiu and Li, 2009 p. 10153). However, it failed to control continual environmental deterioration because of China's priority to economic growth (Hatch, 2003 p. 48).

Before the 1990s, China had no specific department or institution for coping with climate change. In 1990 China set up the National Climate Change Coordination Leading Small Group (CCCLSG) at an inter-ministry level, which was chaired by the National Development and Reform Commission (NDRC) and promoted multi-sectional and multi-ministry cooperation and coordination addressing climate change. In 1998 the National Coordination Committee on Climate Change (NCCCC) was established within the NDRC and was responsible for addressing climate change in China (Zhang and Zheng, 2008 p. 4). Instead of the NCCCC, the National Leading Group on Addressing Climate



Change and Energy Conservation and Emission Mitigations (NLGCC) was established in 2007. The NLGCC was headed by Premier Wen. The NDRC played a fundamental role in coordinating work of the NLGCC. According to Tsang and Kolk (2010 p. 192), the NLGCC was set up to make national climate change policy, coordinate positions on international climate change negotiations, and to identify solutions to addressing climate change.

Under the institutional arrangements, the NDRC released *the National Climate Change Programme* and for the first time announced the objectives of addressing climate change in June, 2007. In November, 2009, the NDRC clarified the 2020 objectives of addressing climate change and its positions on the Copenhagen summit. Since 2008, the NDRC released *the Annual Reports on China's Policies and Actions for Addressing Climate Change*. This annual report describes national circumstances, impacts, objectives and policies and implementations in terms of climate change issues in China (Xinhuanet, 2011). Also, the Chinese government released *the Working Plan for Greenhouse Gas Emission Control during the 12<sup>th</sup> Five-Year Plan Period* in December, 2011 guiding local governments to make and implement low carbon policies. The Chinese government released *the National Strategy for Climate Change Adaptation* in November, 2013 and *China's National Plan on Climate Change for 2014-2020* in September, 2014 (NDRC, 2016 p. 1). These policies demonstrate that significant institutional arrangements were made to facilitate China's efforts to address climate change.

### **1.1.2 China's engagement in global climate change politics**

In 1972, China, through participating in the United Nations Conference on the Human Environment in Stockholm, started its first step to becoming involved in global environmental regimes and raising environmental concern on its political agenda (Economy, 2010 p. 95 p. 178). The year 1973 witnessed the first National Conference on Environment Protection organised by Premier Zhou Enlai and in 1974 an inter-ministerial Environmental Protection Leading Group was established by the State Council (Economy, 2010 pp. 94-95).

As Economy (2010 p. 181) explains, China had little historical responsibility for addressing global environmental problems such as ozone depletion due to its low level of industrial development prior to the 1980s. However, before the 1992

Rio Earth Summit, with the creation of the National Climate Change Coordination Leading Small Group, China started to become a proactive player in international climate change issues (Bjørkum, 2005 p. 26). In the process of shaping China's positions on the United Nations Framework Convention on Climate Change (UNFCCC), as Chayes and Kim (1998 p. 509) point out, China strengthened cooperation with other developing countries, particularly the G-77 member states. The principle of 'common but differentiated responsibilities' was insisted upon by China and other developing countries and it became a key position of China in international climate change negotiations, requiring the developed countries to undertake the responsibility for addressing climate change (Yan and Torney, 2016 pp. 213-220). In 1991, therefore, China formed a coalition with G-77 in order to reach an agreement among developing countries (Foot and Walter, 2010 p. 188, Economy, 1997 pp. 32-33). In June 1992, China signed the Convention, and in 1994 established a ratification of it (Bjørkum, 2005 p. 27).

Prior to the signature and ratification of the Kyoto Protocol, China and other developing countries emphasised the Western historical responsibility for emissions reduction (Bjørkum, 2005 p. 28, Belis et al., 2015 p. 204). China had a considerable disagreement over the flexible mechanisms, particularly the Clean Development Mechanism (CDM). This was because China believed that the flexible mechanism would transfer the responsibility for emissions reduction from developed countries to developing countries (Bjørkum, 2005 pp. 28-29, Friman, 2013 p. 226). However, even though China's positions in international climate change negotiations had not dramatically changed, its attitudes toward the CDM became slightly positive since China began to accept small CDM projects after 2000 (Harris and Yu, 2005 pp. 53-54). The first CDM project contract in China was achieved and signed in 2003 (Lin et al., 2009 p. 4). Notably, in 2011, China adopted the Emissions Trading Schemes (ETSs) with the purpose of utilising the power of market to strengthen incentives to addressing climate change (Lo, 2016 p. 110).

According to Hallding et al (2009 p. 49), in 2006, the Chinese government released its ambitious compulsory target of reducing emissions for the first time. Between 2005 and 2010, the target was to cut 20% of energy intensity, decrease 10% of GHG emissions and raise renewable energy by 10% of the

total energy consumption. This compulsory target was inserted into the 11<sup>th</sup> Five-Year Plan (Hallding et al., 2009 p. 49, Foot and Walter, 2010 pp. 190-191, Young et al., 2015 p. 165). However, as Foot and Walter (2010 p. 193) mentions, before the Copenhagen Summit in December 2009, the Chinese government had not repeated its voluntary actions on emission reduction due to the lack of Western commitment to the ambitious target of reducing 25-40% of GHG emissions at the 1990 level by 2020. However, the Chinese government held a flexible position on the international monitoring system of emission reduction and agreed to a proposal that required the major developing countries to report their progress to the UN every two years (Schreurs, 2016 p. 222).

With an increase in the level of per capita carbon emissions, China has to undertake more international pressure and expectations and it thus adjusted its position on the 2015 Paris climate conference with the US and the EU (Schreurs, 2016 p. 222, Stalley, 2012). Due to domestic environmental concerns and international pressure, China held positive attitudes towards the implementation of substantial measures on emissions reduction and the adoption of the Paris Climate Agreement (Bernauer et al., 2016a p. 155). Belis et al. (2015 p. 211) demonstrate that China achieved its transition from a participant within the coalition of developing countries in the 1990s to a key role in international climate negotiations in 2009 and particularly in 2015.

## **1.2 Economic development in China**

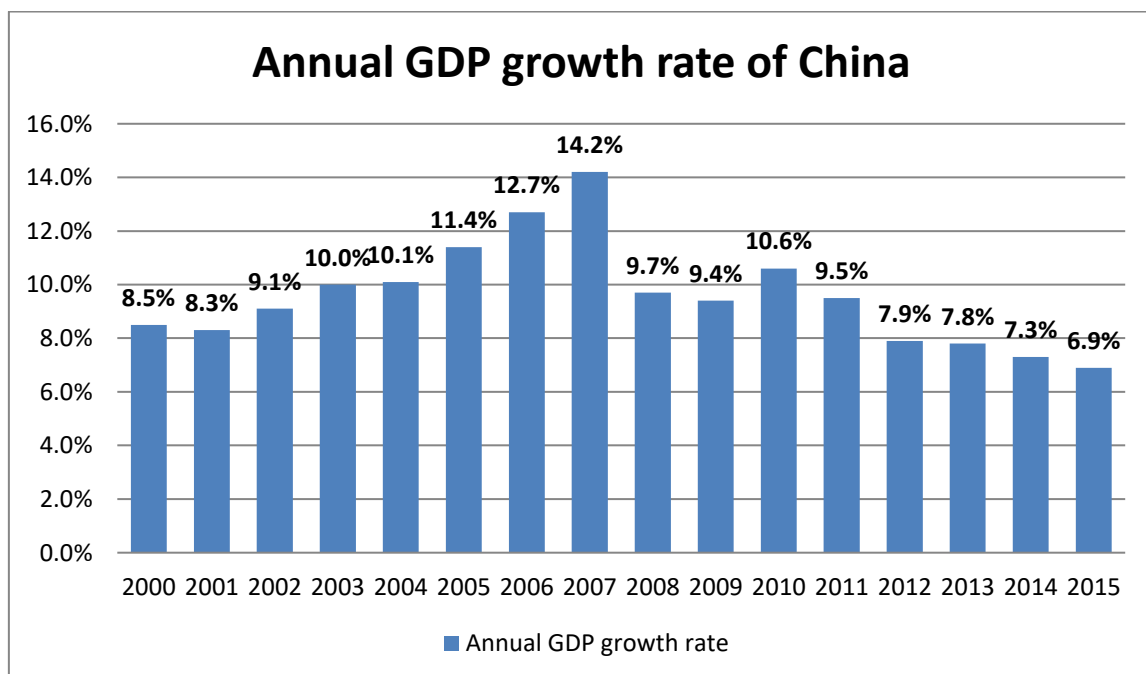
In terms of addressing climate change issues, economic priority and poverty eradication are two primary concerns of the Chinese government (Zhang, 2003 pp. 66-68, Marks, 2010 p. 973, Lo, 2016 p. 120). Therefore, it is very important to understand China's consideration of economic growth.

### **1.2.1 Background**

China implemented the first Five-Year Plan between 1953 and 1957. The Plan allowed the highly centralised allocation of resources such as the heavy industry which was strictly controlled in cities under the Chinese Central government (Webber et al., 2002 p. 120). The government was responsible for the management of economic activity and implementation of the Plan, while the Chinese Communist Party undertook supervision of it (Gray, 2002 p. 294). Prior to economic reform, As Gray (2002 p. 333) describes, economic activities had

almost been halted due to concentrations on political movements and over-centralisation of planned allocation of economic resources. Between 1949 and 1978, the industrial sector's contribution to national economy increased from 12.6% to 34.2% while agricultural contribution decreased to 35.4% from 68.4% (Lin et al., 2003 p. 71). However, the transformation to an industrial nation failed to change China into an advanced and wealthy country. Lin (2003 pp. 70-74) points out that the planned economic system highlighted the significance of heavy industry while it neglected the importance of consumer demand.

Since 1978, the Chinese economic reform had changed China from a centrally-planned economy to a market-oriented society (Wang, 2008 p. 153). The reform also created a growth in the number of township and village enterprises (TVE), the separation of state-owned enterprises (SOE) from local government and the development of foreign direct investment (FDI) in China's market (Shi, 2006). From 1975 to 1990, the average rate of GDP had reached 6.8% (Carraro and Massetti, 2011 p. 3). According to Figure 1.1, it is very obvious that China had witnessed a faster growth rate of GDP since 2000. Before the year 2008 when financial crisis shocked global markets, the China's growth rate was 14.2%, playing a leading role in the world economy.



**Figure 1. 1 Annual growth rate of Gross Domestic Product (GDP) of China (2000 - 2015)**  
**Source from: WB (2016a)**

However, since 2008, the economic growth of China has slowed. In 2015, China even witnessed that its economic growth rate was 6.9%. Certainly, China would carry on its economic slowdown and focus on the rebalancing of economic structure towards services (IMF, 2016 p. 3, Shambaugh, 2016, Green and Stern, 2016).

### **1.2.2 Economic factors influencing climate change policy**

'To address climate change within the framework of sustainable development. It is not only the important common understanding of the international community, but also the basic option of all the parties to the Convention to address climate change. .... China will continue to actively tackle climate change issues in accordance with its national sustainable development strategy in the future' (NDRC, 2007 p. 24).

Economic development and poverty eradication are two priorities on China's political agenda (Zhang, 2003 pp. 66-68, Qi and Wu, 2013 p. 306). China is described as an actor playing a weak role in addressing climate change since it considered economic development as its priority on the political agenda. This is because the legitimacy of the Chinese government was based on its rapid economic growth (Roper et al., 2010 p. 52). Held et al. (2011 pp. 10-11) put emphasis on the close link between legitimacy and political and economic concerns. The legitimacy is based on political-economic-social development through maintaining political stability, rapid economic growth, low inflation and poverty eradication. Harris (2010 pp. 1-2) describes that China's policy did not reflect its role and status as the biggest polluter and emitter while it placed an emphasis on China's role as a poor and developing country. He also stated that China utilised the principle of common and differentiated responsibility to avoid undertaking a legally-binding goal of curbing emissions.

China's urban population, for its first time, became bigger than its rural population at the end of 2011, accounting for 51.27% of its total number (PeopleDaily, 2012). A solution to creating job opportunities is to maintain rapid economic growth (Lieberthal et al., 2009 pp. 30-32). Therefore, economic development has to be prioritised by the Chinese government.

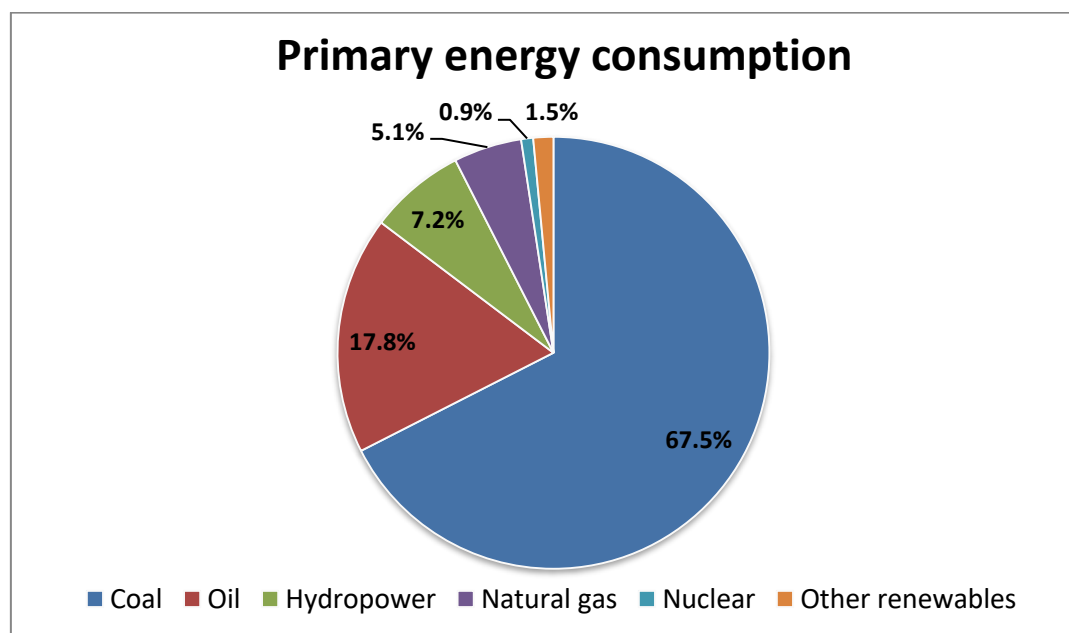
A fundamental reason for prioritising economic growth is that China remains a developing country. As Lewis (2007 p. 157) mentions, the per capita GDP of China is still very low due to its huge population. Even in 2014, after the rapid economic growth, China's per capita GDP remained much lower than that of the

advanced economies such as the US and Japan (WorldBank, 2016). Also, China still has no adequate technical capability of confronting climate change and raising energy efficiency that developed countries have. Furthermore, as China is the biggest carbon emitter, its per capita GHG emissions are still below the level of advanced countries particularly like the US even in 2011 (WRI, 2014). Therefore, economic development remains an important consideration of China's climate change policies and positions.

### 1.3 Energy consumption and emissions

#### 1.3.1 Energy mix

In 2006, coal accounted for nearly 70% of total energy consumption in China whilst oil made up merely 20%. Renewable energies such as nuclear power and hydropower accounted for less than 8% (Marks, 2010 p. 974). In 2009, China contributed to 45.6% and 46.9% of production and consumption of coal in the world. In comparison, the USA accounted for 15.8 % and 15.2 % and Russia made up merely 4.1% and 2.5% in terms of coal production and consumption respectively (BP, 2010 pp. 34-35). Therefore, it is evident that China had become the biggest producer and consumer of coal. As Figure 1.2 shows, the use of coal still accounted for 67.5% of primary energy consumption of China even in 2012.



**Figure 1. 2 Primary energy consumption in China in 2012**

Source from: BP (2014)

Hatch (2003 pp. 46-47) describes coal as a preferred option for energy consumption. As the author explains, other options, such as nuclear power and hydroelectric power, were not available to the industrial sector, given that their costs would be very expensive. The first factor is the pattern of coal consumption. Coal, the conventional energy, has been utilised not only for industrial production but also for residential heating systems (McMullen-Laird et al., 2015 pp. 5-7). The second factor is technology. Before the 1980s, having concentrated on political movements, the Chinese Communist Party ignored the significance of improvement in energy efficiency. The third one is the coal pricing policy. The price of coal was controlled by the governmental management rather than the market. During the planned economy before the 1980s, the low price of coal could not make people recognise the importance of energy conservation.

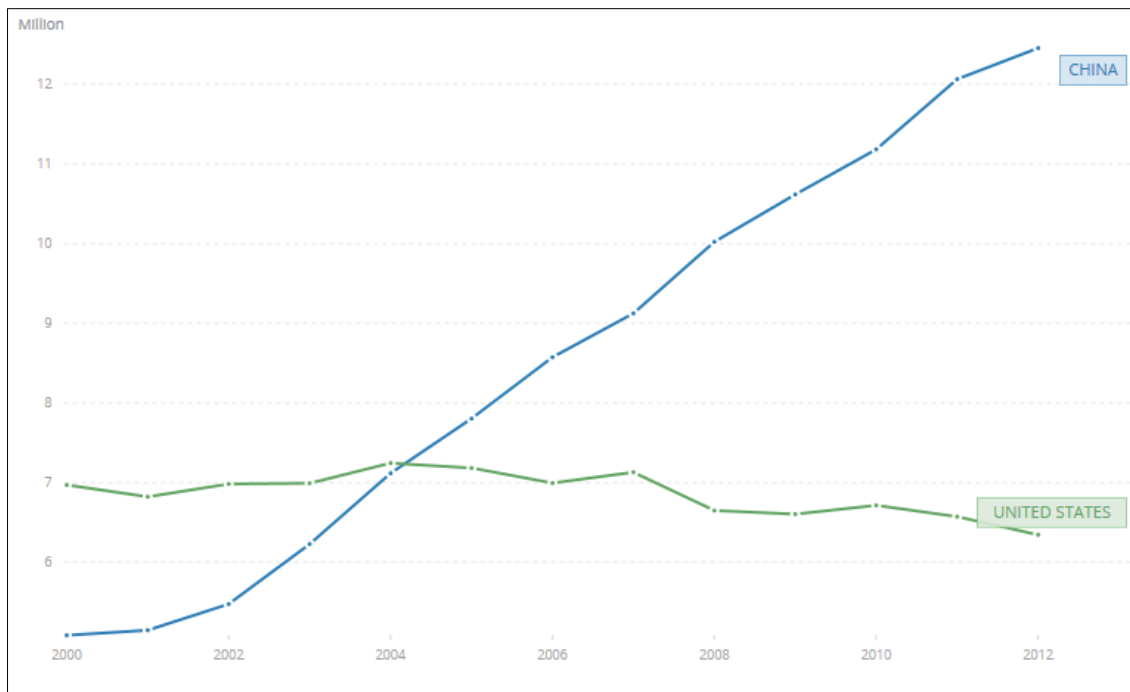
In 2009, oil demand in China caused an increase in oil consumption of 6.7% compared to 2008, and shared 10.4% of the total global consumption (BP, 2010). Rapid economic development resulted in an increase in energy demand, which led to an energy shortage. As a result, China transformed from a self-sufficient energy supplier to a large purchaser of energy products (Rommeney, 2008 p. 8).

### **1.3.2 Energy intensity and emissions**

China has witnessed its sharp increase in the total level of GHG emissions and it surpassed the US after 2005 (WB, 2016b) (see Figure 1.3). In the 11<sup>th</sup> Five-Year Plan (2006-2011), the Chinese government made a decision to achieve a total GDP 4 times that of the 10<sup>th</sup> Five-Year Plan (2000-2005) with only twice the amount of increase in energy consumption (Richerzhagen and Scholz, 2008 p. 312). From 1980 to 2000, emission intensity was reduced under the rapid economic development. However, the energy intensity of China is 2.8 times higher than the average intensity level of the world and 3.8 times higher than that of OECD countries in 2000 (He et al., 2010 p. 4494). Between 2002 and 2005 this trend of energy intensity reduction came to a halt and began to increase (Lewis, 2007 p. 156 p. 253, Aden and Sinton, 2006).

Economic development, in particular the rapid industrialisation since the 1980s, has raised the level of energy consumption and carbon dioxide emissions. By

2010 the amount of energy consumption and carbon dioxide emissions was nearly 4.5 times and 4 times respectively greater than in the 1980s while the GDP was approximately 16 times more. The amount of emissions in China still increased dramatically, and China replaced the USA becoming the biggest emitter and the largest importer of crude oil from Saudi Arabia (Keith, 2011).



**Figure 1. 3 Total greenhouse gases (GHGs) emissions in China and the US from 2000 to 2012 (kt of CO2 equivalent)**

**Source from: WB (2016b)**

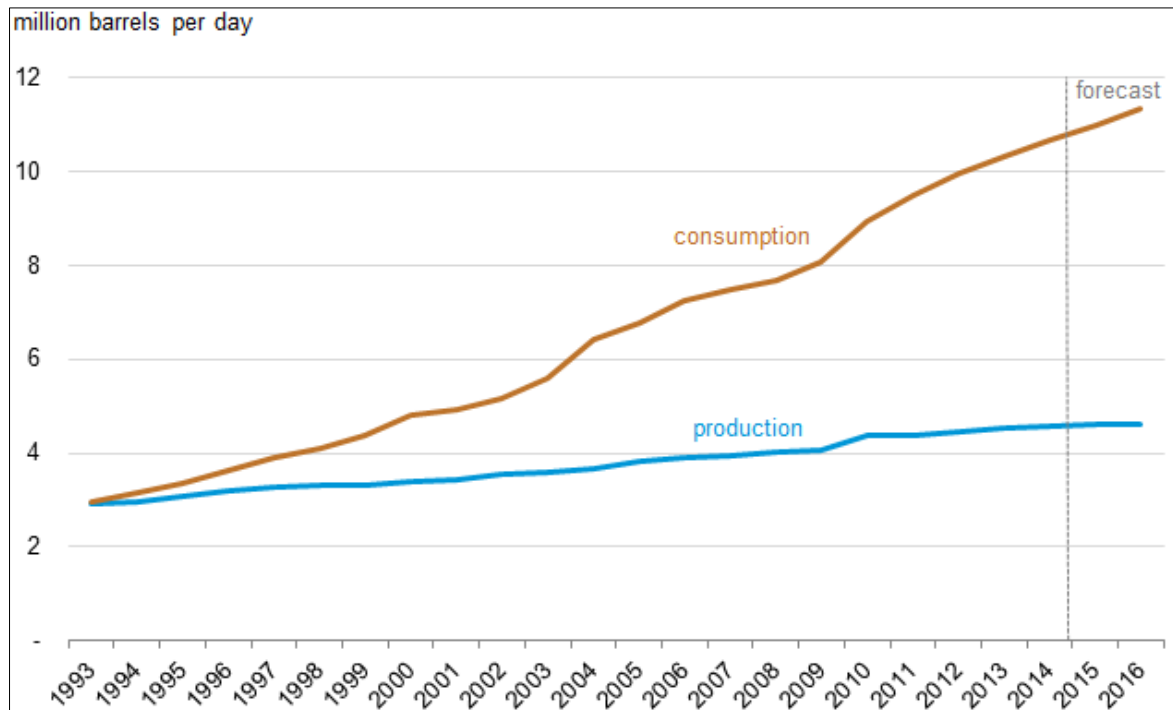
New leadership was formed after the 18<sup>th</sup> National Congress of Communist Party of China in 2012, and Xi took office completely in the early 2013. In June, 2013, Xi called for an 'Energy Revolution' through raising energy production, improving energy diversity and efficiency, developing renewable energy. The energy revolution involves achieving the transformations of consumption, supply, technology, and system. In addition to energy security, climate change and environmental concerns are very important motivating factors for raising the idea of an energy revolution (Xu and Chung, 2016 pp. 114-115).

### **1.3.3 Energy factors influencing climate change policy**

China confronts energy challenge and takes energy concerns as a major contributor to forcing policy-makers to consider climate change issues (Nyman and Zeng, 2016 pp. 301-303, Gallagher, 2007 p. 390). It had demanded greater energy during the rapid economic growth (Bo, 2016 pp. 94-96). However, as



China had become the biggest consumer of coal and a major consumer of oil, energy security had to be considered. Energy security refers to continuous energy supply for economic growth. The Chinese government realised that energy security would have to depend on raising efficiency of energy use rather than simply locating the supplier of energy (Nyman and Zeng, 2016 pp. 302-305).



**Figure 1. 4 China's oil demand and domestic supply**

**Source from: USEIA (2015)**

Held et al.(2011 pp. 12-16) point out that the heavy dependence on coal consumption failed to restrain China from becoming a net oil importer in 1993 (see Figure 1.4). Therefore, the Chinese government started to be concerned about energy security. According to Downs (2006 pp. 13-14), in the context of energy security, the Chinese government is concerned about energy supply, price and delivery.

First of all, the Chinese government has to secure an adequate supply. Oil is used for fuelling China's economic growth and also for strengthening the power of the military. Due to its significant role in economic growth and military, oil also plays an important role in a rise of China's international status (Downs, 2006, Held et al., 2011). Second, a reasonable oil price is the key to energy security. If the oil price is very high, people, particularly taxi drivers and consumers of oil

products, would feel so difficult to afford the expensive oil products. As a result of this, social dissatisfaction might cause political instability and threaten domestic security. If the oil price is very low, the refiners would lose their interests in investments in oil products, which might cause a shortage of energy. Last but not least, the delivery issue is also a considerable concern (Nyman and Zeng, 2016 pp. 308-310). The Strait of Malacca is a key for a safe of delivery because 80% of oil import has to pass through this Strait to China. In case any conflicts occur in this Strait, most of oil imports to China would be stopped. Therefore, due to its concerns about energy security, the Chinese government not only makes an effort to look for energy supply but also it puts an emphasis on reducing energy consumption and improving energy efficiency (Held et al., 2011 pp. 16-17) .

In contrast, Heggelund (2007 pp. 158-165) mentions that energy supply and consumption, a key contributor to economic growth, is a main reason why China was not eager to reduce emissions. Energy is linked closely with economic development. Without increased energy supply, economic development would face a huge challenge. Energy efficiency improvement, such as the establishment of an oil-based energy supply, requires huge investments at the time when China has been a major GHG emitter who heavily depends on coal consumption. It is in this sense that the economic cost of utilising alternative energy was a significant consideration in terms of climate change issues in China.

#### **1.4 Environmental crisis and China's vulnerability to climate change**

'Vulnerability to climate change is an emerging issue in China, and could contribute to elevating climate change issues on China's domestic agenda in the future' (Heggelund, 2007 p. 155).

China has recognised the seriousness of climate change issues over time and particularly adopted a 2°C target of limiting global temperature rise in 2009 (Gippner, 2016 p. 60). China was concerned about environmental pollution and climate change's negative impacts on China (Lo, 2015b p. 153). Climate change would cause natural disasters such as drought in Northern China and flooding in Southern China Wiener (2008 p. 1816). Also, industrial emissions can cause air pollution and environmental degradation. Environmental problems

have been become an important consideration of climate change and energy policy-making of China (Gippner and Torney, 2017 pp. 649-650).

Lo (2010) demonstrates that both public health and environmental protection are closely linked. It is reasonable to assume that continuous environmental degradation would cause a mass public health problem and incite public dissatisfaction with governments. Environmental concerns particularly air pollution, therefore, are one motivation for climate policy-making (McMullen-Laird et al., 2015). The Chinese government has to balance economic development with environmental protection (Lo, 2010).

A concern about a food crisis is another key issue related to climate change. Climate change would generate significant negative effects on wheat productivity, which would decrease as climate change accelerated (You et al., 2008 p. 273). In terms of a water crisis, Wang et al (2008 p. 292) find that water shortage had significantly threatened the agricultural productions in nearly 16% of villages in China. According to IPCC (2007 p. 49), water availability would decrease by 10-30% in some dry regions in East Asia at the end of the 21<sup>st</sup> century. This would lead to a deterioration of the food crisis and water shortage in China as a result of climate change.

Schipper (2006 p. 90) thinks that the Chinese government had realised that environmental problems would be an obstacle to rapid economic development, and China would implement environmental policy rather than completely follow economic policy. Environmental problems could eventually influence many fields including public health, productivity and economic development (Stensdal, 2012 p. 125). Therefore, environmental issues played an important role in influencing positions and policies regarding climate change. Mol and Carter (2006 pp. 3-6) demonstrate that environmental investments were expanding gradually and the Chinese government was raising the awareness of environmental issues. However, the effectiveness of policy implementation remains a main problem (Day, 2016). Marks (2010 p. 982) demonstrates that China had made many laws relating to environmental protection but only 10% of those were enforced.

## **1.5 International factors influencing climate change policy**

China's desire to be a leading power among the developing countries was an incentive for China's engagement in international climate change negotiations (Jørgensen and Wong, 2016 p. 68). As Zhang (2008 pp. 8-9) points out, the Chinese government has put climate change negotiations onto its political agenda because it is fond of the status of China in the G-77. Liang (2003 p. 75) demonstrates that China wanted to acquire legitimacy as a developing country through keeping its role in the G-77. As a result of this, China was able to acquire a non-legally binding role in international climate change negotiations and it had no responsibility for contributing to curbing emissions (Schreurs, 2016 p. 222). Later on, China would continue to favour its leading role in the G-77 and would have no short-term plan to leave the group of the developing countries (Heggelund, 2007 p. 177). Furthermore, Foot and Walter (2010 p. 200) placed an emphasis on the significance of China's role in the creation and evolution of international climate change governance. Similarly, He (2010 pp. 14-15) points out that major developing countries formed a coalition namely the BASIC including Brazil, South Africa, India and China shaping a united power of bargaining with the developed countries. The BASIC coalition required developed countries to take substantial action on mitigation, financial support and technology transfer.

Financial and technological support is another considerable international factor influencing China's climate change policy and position. Foot and Walter (2010 p. 200) also explain that China's benefit from climate change issues is an important incentive to engage in international climate change regimes. In the early stage of China's participation in international climate change regimes, China's aim was to acquire international funds in order to train experts and support research programmes in terms of climate change issues (Foot and Walter, 2010 p. 200, Economy, 2001 p. 244).

In terms of financial and technology transfer, China initially showed resistance to the Clean Development Mechanism (CDM). Firstly, China was concerned about the transparency of energy data because it was reluctant to expose the information of resources to foreign countries. Secondly, China thought that developed countries could utilise the CDM to shirk their responsibilities for reducing emissions (Lewis, 2007). However, since 2000, China has started to

embrace the CDM in order to acquire financial and technology support. China changed its attitudes towards the CDM and believed that it could be an effective tool for raising the level of technology transfer from developed countries (Lewis, 2007 p. 164). Since 2000, China has become the biggest country in terms of supplying CDM-based certified emission reductions (CERs) (Qi et al., 2008 p. 387).

The case of the refusal of the CDM reflects China's concern about national sovereignty such as its capability of protecting energy data. Chinese Premier Li Peng declared that China had concerns about national sovereignty and that international cooperation should be based on respecting national sovereignty (Zhang, 2003 pp. 66-67). Held et al (2011 pp. 19-20) explain that due to foreign interventions in Chinese history, the protection of national sovereignty is considered a special value in shaping China's foreign policy including its climate change position.

In addition to national sovereignty, China's international image and pressure is an important consideration of its positions on climate issues (Qi and Wu, 2013 p. 305). China has desires to be a responsible country through holding a positive attitude towards addressing climate change under the principle of economic development. China, with its raised status in the economic and political field, was interested in shaping its international image and reputation through complying with international rules and regulations (Heggelund, 2007 p. 178). Foot and Walter (2010 p. 200) confirm that China has acquired benefits from adjusting climate change policy, which serves to highlight the importance of its international image.

Heggelund (2007 p. 177) also points out that the USA withdrawal from the Kyoto Protocol in 2001 was thought to be an unacceptable consequence by China. This was because the US was the largest emitter before 2006. However, the two countries occasionally have similar positions when it comes to clean development. For example, both China and the USA joined the Asia-Pacific Partnership for Clean Development and Climate (McGee and Taplin, 2014 p. 344). The US and China delivered a Joint Announcement on Climate Change in November, 2014 (Belis et al., 2015 p. 205, Dimitrov, 2016) and jointly

announced the ratification of the Paris Climate Change Agreement in September, 2016 (WRI, 2016).

Even though China's foreign policy had not been influenced by other countries on a large scale, technical issues of environmental protection allowed outsiders to directly influence certain governmental departments regarding environment and scientific research and to indirectly affect its diplomatic officials (Ross, 1998 p. 834, Torney, 2015 p. 113). The officials from certain governmental organs such as the State Environmental Protection Administration (SEPA) and the State Oceanic Administration (SOA) were more interested in environmental protection than other governmental officials (Ross, 1998).

Western countries play an important role in educating and cultivating China through observing the change in China's attitude towards the CDM (Lo and Howes, 2015 p. 63). Economy (2001 p. 249) demonstrates that the USA hoped that China would be interested in actions on mitigation since it planned to provide assistance to scientific research on climate change in China. Also, the EU has made a great contribution to influencing China's energy, environmental and climate change policies (Torney, 2015 p. 114).

Yu (2008 p. 6) believes that China's communication from the UNFCCC and from the negotiations during the annual Conferences of the Parties (COPs) has made a significant contribution to shaping China's climate change policy. With a rise in the level of the knowledge acquired through negotiations, the Chinese government started to change its attitudes towards climate change issues and played a proactive role in international climate change affairs. The author also points out that those domestic factors fail to explain the shape of foreign policy towards climate change. However, this view could ignore the important role of domestic factors such as economic interests in the process of policy making. As Yu (2008 p. 6) mentioned, there are different interests among ministerial agencies. It is hard to believe that these ministries (including other ministerial level agencies) can reach an agreement of policy making at a coordinated level. Due to their different interests and incentives, these ministries necessarily can generate a bargaining relationship in the process of policy making.

## **1.6 Major actors in climate change policy making**

### **1.6.1 Governmental actors influencing climate change policy making**

Apparently, the National Development and Reform Commission (NDRC) is the most powerful body within the process of climate change policy (Lo, 2015b p. 153). Its priority is to optimise and maximise economic development and make macro-economic policy (Bjørkum, 2005 p. 43). Therefore, the NDRC has to consider that the implementation of climate policy, such as reducing energy consumption, might adversely affect economic growth.

The Ministry of Foreign Affairs (MoFA) is the second most significant ministry in terms of climate change policy making. The international climate change negotiations could affect China's national interests, and therefore the MoFA plays a significant role in protecting national and diplomatic interests. Meanwhile the MoFA is also responsible for strengthening cooperation between the NDRC and foreign institutions and organisations (Chmutina, 2010).

The Ministry of Scientific and Technology (MoST) is responsible for technology innovation (Hart et al., 2014 p. 6). Technology development and innovation is an efficient way to mitigate emissions and reduce energy consumption. The MoST also believed that China should begin to introduce new technology from abroad in order to improve capability of confronting climate change (Bjørkum, 2005 p. 44, Stensdal, 2015 p. 59). Therefore, one of China's fundamental positions on climate change is to facilitate and support the technology transfers from developed countries to developing countries.

The Ministry of Environmental Protection (MEP) is responsible for setting and implementing detailed standards at the provincial level in order to achieve the goals of emissions mitigation made at the central level (Stensdal, 2015 pp. 55-56). However, the MEP plays a marginal role in making climate policy (Richerzhagen and Scholz, 2008). The role of the MEP is to implement general policy through strictly controlling emissions and has little involvement in economic policy.

The China Meteorological Administration (CMA) initially was responsible for scientific climate research and cooperation and leading China's strategies of climate change negotiations. With a shift from scientific issues to political and

economic affairs in terms of addressing climate change, the CMA declined as a weak role in making climate policies (Richerzhagen and Scholz, 2008 p. 317). The CMA currently is a leading body in China for conducting climate change research (Wübbeke, 2011 p. 6).

### **1.6.2 Other actors influencing environmental and climate issues**

The political and economic transition in China has pushed social development. In terms of environmental issues, the relationship between government and civil society has changed dramatically (Schreurs, 2011 p. 457). In 2004, the recorded number of environmental protests was about 74000 (Carter and Mol, 2006 p. 341). In December 2009, residents protested against the incinerator project in Panyu, Guangdong Province. As a result of this protest, the local government made a decision to delay the project (Lang and Xu, 2013 p. 838).

As Mol and Carter (2006 p. 160) demonstrate, the Chinese government was concerned about groups and individuals engaging in non-governmental activities. Initially, most Non-Governmental Organisations (NGOs) were either managed by the government or backed by the government through financial support. Authors also put an emphasis on a change in China's attitude towards NGOs (Xie, 2011 p. 207). The Chinese government realised the advantage of NGOs and then hoped to cover the gap between public opinion and governmental policy (Bernauer et al., 2016b p. 2). Therefore, China began to tolerate the creation of NGOs and the introduction of international NGOs such as Greenpeace.

Social development and transition was also pushed by media coverage. With an increase in media reports regarding environmental problems, environmental issues attracted more attention (Shi and Zhang, 2006 p. 289, Eberhardt, 2015 p. 37). Journalists were given more freedom to report news related to environmental problems as such news was no longer considered politically sensitive (Mol and Carter, 2006 p. 162, Eberhardt, 2015 p. 38).

## **1.7 The key policies at the critical points**

This PhD thesis selects three key policy documents as sources of understanding changes in climate policy rhetoric in China. Also, it identifies the dates of releasing these documents as the critical points for observing dynamic climate change discourses in China. These critical points are: 1) the release of



*National Climate Change Programme* on 4<sup>th</sup> June, 2007; 2) the announcement of China's positions in the Copenhagen Climate Change Conference on 26<sup>th</sup> November, 2009 and; 3) the submission of the Intended Nationally Determined Contributions (INDCs) to the United Nations Framework Convention on Climate Change (UNFCCC) on 30<sup>th</sup> June, 2015. The primary reason why these three critical policy moments are identified is that they reflect the first target of reducing energy intensity of China in 2007 (Hallding et al., 2009 p. 49), the first target of reducing carbon intensity of China (Foot and Walter, 2010 p. 193) and an unprecedented resolution on controlling coal consumption and reaching a carbon peak by 2030 (Schreurs, 2016 p. 222, NDRC, 2016). These three critical points show the milestones of addressing climate change in China.

However, before 2007, there were several significant events in terms of climate change issues. Particularly, the 1992 Rio Earth Summit and the 1997 Kyoto protocol are milestones in global climate change politics. However, there are three reasons why the dates of critical points are selected from the year 2001 onwards. Firstly, the marketization and commercialisation of media had not been considerably obvious policy until the mid-1990s (Zhao, 2004 p. 186). It is in this sense that observing climate change news reporting issued later than this media reform provides an opportunity to find more voices and wider discourses. Secondly, since 2000, China has made several impressive innovations such as the adoption of the Clean Development Mechanism (CDM), the establishment of National Climate Change Programme, and Chinese Premier's attendance at the 2009 Copenhagen Summit. Observing these events plays a key role in understanding the evolution of Chinese climate change politics and discourse. Thirdly, the earliest news articles can be accessed via the Internet from the year 2001 onwards.

#### **1.7.1 China's National Climate Change Programme in 2007**

According to Hallding et al (2009 p. 49), before the launch of the *National Climate Change Programme* in 2007, the Chinese government released its ambitious compulsory targets of reducing emissions for the first time in 2006 (Hallding et al., 2009 p. 49, Foot and Walter, 2010 pp. 190-191).

These targets were clarified in *the National Climate Change Program* released on 4<sup>th</sup> June, 2007 by the National Development and Reform Commission

(NDRC) (Chinanet, 2007). The guidelines aim at scientific approach of development, construction of a socialist harmonious society, advancing a national policy of energy conservation and environmental protection, controlling GHG emissions, securing economic development and relying on science and technology. The principles of the program are sustainable development, common but differentiated responsibilities, equal emphasis on mitigation and adaptation, science and technology innovation, and international cooperation. The objectives of addressing climate change are the 20% reduction of energy intensity namely consumption per unit GDP by 2010; renewable energy would be up to 10% in primary energy by 2010; by 2010, nitrous oxide emissions from industry would be kept at the same level as it was in 2005; forest coverage would be increased to 20%; and the carbon sink would raise by 50 million tons between 2005 and 2010 (NDRC, 2007 p. 26).

### **1.7.2 Chinese positions on the Copenhagen Summit in 2009**

As Foot and Walter (2010 p. 193) mentioned, before the 2009 Copenhagen Summit, the Chinese government had not repeated its voluntary actions on emissions reduction due to the lack of Western commitment to the ambitious target of reducing 25-40% of GHG emissions at the 1990 level by 2020. At the Copenhagen Summit, Chinese Premier Wen attended and discussed climate change with other global political leaders.

Before this critical point, the annual report '*China's Policies and Actions for Addressing Climate Change*' was released by the National Development and Reform Commission on (NDRC) in October, 2009. This annual report is designed to show China's policies, actions, efforts, positions, and achievements in terms of addressing climate change issues (NDRC, 2010). After this critical point, the Copenhagen Climate Change Summit started on 7<sup>th</sup> December, 2009 (UN, 2009). On 26<sup>th</sup> November, 2009, the State Council of China announced its target of reducing emission intensity by 2020 and its positions at the Copenhagen Climate Change Conference (NDRC, 2009).

'China is going to reduce the intensity of carbon dioxide emissions per unit of GDP in 2020 by 40 to 45 percent compared with the level of 2005' (NDRC, 2009).

This target was announced by the Chinese government before the Copenhagen Summit.

### **1.7.3 The submission of the INDCs of China to the UNFCCC in 2015**

China submitted the proposal of Intended Nationally Determined Contributions (INDCs) to the institution of the United Nations Framework Convention on Climate Change (UNFCCC) on 30<sup>th</sup> June, 2015. In order to reach an agreement during the Paris climate change conference held in December, 2015, the parties to the UNFCCC needed to submit their proposals of INDCs. This submission marks a milestone in the climate change governance of China. Firstly, China made a commitment to achieve the target of reducing 60% to 65% of carbon intensity and reaching a carbon peak by 2030. This is an ambitious target as the energy mix of China relies heavily on coal consumption. Secondly, China called for developing countries to undertake the responsibility with 'enhanced mitigation action' and to raise the level of transparency of the action (NDRC, 2015 pp. 17-19). This marks a shift in China's role in global climate politics from a passive actor to a proactive leader.

Therefore, as described above, three critical points are: 1) the release of *China's National Climate Change Programme* on 4<sup>th</sup> June, 2007; 2) the announcement of its target and positions in the Copenhagen Summit on 26<sup>th</sup> November, 2009 and; 3) the submission of the Intended Nationally Determined Contributions (INDCs) to the United Nations Framework Convention on Climate Change (UNFCCC) on 30<sup>th</sup> June, 2015.

## **1.8 Summary**

This chapter has introduced the evolution of domestic climate change institutions and China's participation in global climate governance and negotiations. It indicates that China has widely involved in action on addressing climate change issues domestically and internationally.

Also, this chapter critically reviews China's considerations of economic development, energy and emissions, environmental concerns, international factors and major actors in terms of addressing climate change. These considerations involve the five dimensions of climate change issues identified in this thesis. The economy dimension refers to China's primary concern about economic development. The energy and emissions dimension reflects China's focus on energy issues and carbon emissions. The public involvement dimension indicates China's shift in attitudes towards the broad participation of

various actors in addressing climate change. The science and ecology dimension is demonstrated by China's concern about environmental issues and its recognition of the reality and seriousness of climate change issues. The responsibility dimension involves discussions on climate justice and responsibilities for reducing emissions in China, as well as other developing countries, key economies and industrialised nations.

Finally, the three key policy documents concerning climate change issues are discussed and identified as the critical policy moments for observing dynamic climate change discourses in China. Chapter 7 conducts the discourse analysis of key statements identified in these policy documents and compares and contrasts them to newspapers discourses.

The next chapter will discuss China's media system, critically review existing literature on climate change discourses and coverage of China and identify and introducing the three newspapers as data sources in my analysis. It will state the limits of current studies on climate media discourses and reveal how the newspapers can cite various actors and construct a wide range of statements in the climate coverage in China.

## **Chapter 2: Climate change journalism and coverage**

This chapter provides an overall literature review on climate change journalism and coverage, framing and news sources. It reviews studies on environmental coverage and takes a further step towards understanding climate change coverage. The review shows how environmental and climate change issues are framed in the media, how journalistic practices influence the framing of issues and the selection of news sources and how various frames and actors compete for gaining media attention and their representations. Also, this chapter reviews existing literature on climate change media and coverage particularly in Western countries and extends it to the case of China. It discusses how climate change issues are framed and news sources are cited in media in China. Based on the literature review, a central question of my thesis emerges: how have climate change issues and various actors been constructed and cited in newspapers in China? Finally, this chapter explains why newspapers are selected as main data sources and *People's Daily*, *China Daily* and *Southern Weekend* are identified. Section 2.1 provides an overall review on journalistic practices and rules. Section 2.2 explains the main feature of the relationships between media and the environment. Section 2.3 discusses the distinctive features of climate change coverage. Section 2.4 discusses how climate change issues are framed in the media primarily in newspapers. Section 2.5 explains how various claim-makers are represented as news sources in the climate coverage. Section 2.6 provides an insight into environmental journalism in China. Section 2.7 reviews existing literature on climate change coverage of China. Section 2.8 shows the main feature of contemporary media system of China. Section 2.9 explains why the three newspapers are identified as main data sources in this PhD thesis.

### **2.1 Journalistic practices and newsgathering routines**

Shoemaker and Reese (2011 p. 102) describe news routines as a form of constraining and functioning in relation to the way newspapers to select and create their news productions. The newspapers and journalists are expected to report events that have news value. The events do not necessarily refer to issues. For example, climate change issues have been existing since the industrial revolution but they were not recognised until the scientific discovery

revealed in the last few decades. Climate change issues can be receiving attention from media when being linked to significant events such as the 1992 Rio Earth Summit and the 1997 Kyoto Protocol (Boykoff and Boykoff, 2007). While events might be gaining attention from journalists and triggering coverage, they are not necessarily relevant to the framing process of the issues. On the one hand, weather events might raise the media's attention to climate change. On the other hand, climate change issues have been framed politically, economically, socially and culturally (Horta et al., 2017). Therefore, my research looks at how climate change issues have been discursively constructed in newspapers in China rather than simply examining how events trigger coverage.

Also, news routines involve news sources for journalists and newspapers. News sources can affect journalistic practices and news routine (Shoemaker and Reese, 2011 p. 102). Governmental agencies can provide official information for journalists to report news. In this way, political power can influence the selection of news topics and news routines of journalists and newspapers (Shoemaker and Reese, 2013 p. 188). Also, economic elites are able to influence news routines and access to journalists through providing commercial information and raising advertising revenue (Gandy, 1991 p. 15). In this sense, the news routines may influence journalistic practices and particularly climate change coverage (Saunders, 2017). Therefore, this chapter reviews studies on Chinese media system and journalism and discusses the representation of various actors as news sources in the coverage. On the basis of this review, my PhD research looks at how various social actors namely news sources have been cited by the newspapers in the climate change coverage in China.

## **2.2 Environmental journalism, coverage and communication**

Environmental problems cannot speak and explain why and how they are happening and seek solutions by themselves but they have to be understood through production and construction (Cox and Pezzullo, 2016 p. 97, Hansen, 2010 p. 14). This means that human society needs to make sense of environmental problems. As Hansen (2010 p. 15) explains, from a social constructionist perspective, environmental problems should not be simply

considered objective issues but they involve a dynamic social process of making sense of issues.

With the development of technology, media play a key role in communicating about the environment (Cox and Pezzullo, 2016 p. 91) and influencing environmental politics and decision-making (Anderson, 2014 p. 38). Therefore, understanding environmental journalism is vital to exploring the framing of environmental issues and representation of various actors in newspapers. There are three general theoretical approaches towards understanding environmental coverage and communication namely political economy, structuralism and the cultural approach (Anderson, 1997 p. 20).

The political economy approach focuses on explaining how the nature and ownership of media determines their environmental coverage (Anderson, 2009 p. 166). This perspective can be used to explore the different mechanisms of journalistic practices in different newspapers. Media might, based on their different interests and preference, make sense of environmental issues in different ways. For example, their political preference and advertising sources can play an important role in influencing the coverage. Even though this PhD thesis does not focus on discussing the political and economic influence of newspapers over their coverage, I look at how different newspapers frame climate change issues and cite various actors in different ways.

Another approach is called structuralism focusing on journalistic rules, practices norms and ideology. This can be used to explain how journalists and media select and filter news topics and sources according to their journalistic practices (Williams, 2015 p. 197). It is a fact that environmental problems cannot speak automatically but they can be socially constructed by the actors of mass communication including media. In this sense, environmental coverage does not necessarily reflect the whole picture of objective reality but it can be filtered, tailored and selected by editors, journalists and media. Therefore, this PhD work reviews existing literature on journalistic selection and norms and identifies an academic gap.

The cultural approach reflects an emerging perspective of understanding environmental politics, communication and coverage (Anderson, 2009 p. 174). My PhD thesis uses a social constructionist perspective for how climate change

issues have been constructed in newspapers in China. Therefore, this approach provides a fundamental basis for addressing the key research question of this PhD research. The next section integrates these approaches in the discussion of climate change coverage. It reviews existing research on journalistic practices in terms of climate change coverage.

## **2.3 Climate change journalism and coverage**

Environmental and climate change coverage, similar to other news reporting, are ruled and constrained by media and journalistic practices and norms (Berglez, 2011 pp. 451-452, Cox and Pezzullo, 2016 pp. 98-103, Boykoff and Boykoff, 2007). Firstly, the political system can be a factor affecting climate change journalism and coverage. Boykoff and Boykoff (2004 p. 126) demonstrate that media might tend to provide political information and raise the voice of politicians. Gavin (2009 p. 776) attributes weak British media attention to climate change to the UK political and electoral system in which climate issues are not primary topics in general elections.

Secondly, economic considerations such as advertising revenue can be a factor affecting journalistic practices (Boykoff and Boykoff, 2004 p. 126). Business actors can invest in the media industry affecting journalistic practices (Edwards and Cromwell, 2014). With the reform of media system in China, the Chinese media has been in transition to commercialisation and marketisation while they remain controlled by a propaganda system. Therefore, it is very interesting to observe how various news sources including business actors are cited in the Chinese media.

Thirdly, journalistic rules can be a key factor contributing to climate change coverage. Objectivity and balance are two significant rules and norms causing the problems of communicating climate change (Hansen, 2010 p. 17, Boykoff and Boykoff, 2004 p. 126). In order to ensure news objectivity, journalists need to acquire information and rely on news sources (Cox and Pezzullo, 2016 pp. 98-103). News sources are those who have professional knowledge and information and can provide them for journalists (Williams, 2015 p. 197).

On the one hand, various social actors struggle to define, visualise and make sense of climate change issues. The objective reality of environmental problems cannot express themselves. They have to rely on how various social actors



explain them. Media have to communicate the so-called objective reality on the basis of the process of making sense of the issues by these actors (Carvalho, 2008 p. 164). For example, environmental groups and activists can set the agenda, attract media attention and influence environmental coverage through protests and street activities (Cox and Schwarze, 2015 p. 76).

On the other hand, news sources can be selected and filtered by journalists. Different social actors have different capability of access to media and providing information to journalists (Anderson, 2014 p. 37, Shoemaker and Reese, 2013 p. 191). Various social actors have to compete for media attention and struggle to be identified as news sources (Anderson, 1997 p. 35). Although media are committed to news objectivity, it is a fact that certain news sources can have a privilege to access to media. Official, governmental and elite news sources play a dominant role in providing information and knowledge (Williams, 2015 p. 197) and they can influence environmental coverage (Anderson, 2015a p. 177).

Another significant journalistic rule and norm is balance. Balance refers to giving equal weight of news reporting for two sides or more various voices in climate change coverage (Anderson, 2009 p. 172, Boykoff and Boykoff, 2007). However, this journalistic norm makes a significant contribution to the problems of communicating climate change and gap between scientific evidence and public understanding. There are two major problems of balance in climate change coverage. The first problem is that balance requires journalists to reflect two sides of perceptions of climate change and exhibit competing discourses between scientists and climate sceptics (Boykoff and Boykoff, 2004 p. 126, Cox and Pezzullo, 2016 pp. 98-103, Anderson, 2009 p. 172). While the academic community has reached a consensus on scientific certainty of climate change, debates between the two sides can be found in media discourse even though they had been diminishing over time (Boykoff and Boykoff, 2007). The second problem is that balance requires journalists to listen to various voices from different social actors. In this sense, climate change scientists have to compete with other social actors including climate sceptics, political leaders and business people. The scientific voice of climate change has to be linked with other concerns (Williams, 2015 p. 198) and/or be reframed as other issues such as moral consideration (Nisbet and Newman, 2015 p. 327) and public health (Hansen, 2015b pp. 384-391, Nisbet, 2009).

Therefore, due to objectivity and balance being journalistic norms and rules, this PhD research explores how climate change issues have been discursively constructed in very different ways and various social actors are cited as news sources in newspapers.

## **2.4 Framing climate change**

Framing approach has been central to the existing studies of climate change coverage. Therefore, in this section, I review and critique the framing approach. There are two approaches namely lumping/labelling framing and constitutive/persuasive framing. The lumping approach just simply labels the frames and fails to catch the dynamic process of constructing climate change issues. The constitutive/persuasive framing can be used to observe the evolution of climate change issues, dimensions and frames. Frames are not seen as a static condition. Therefore, I use the constitutive/persuasive framing approach to analyse the dynamic constructed climate discourse. Goffman (1974 p. 21) defines framing as process of making sense of something which does not have a meaning. This process involves two functions namely constitutive and persuasive framing. The constitutive dimension refers to constructing and making sense of issues, and the persuasive dimension involves one idea and/or view having privilege over others (Entman, 1993 pp. 62-63, Cox and Pezzullo, 2016). In this sense, framing refers to a process of media's construction of issues and an attempt to influence public perceptions (Scheufele and Tewksbury, 2007 p. 11).

However, based on the research design and purpose, my PhD thesis focuses on the media's construction of issues rather than the mechanism of relationships between media and audience. Understanding the framing of climate change issues can be an important basis for future research on media effects on public perceptions. Therefore, we need to discuss and critically review existing research on framing climate change in coverage. Framing involves selection and salience (Entman, 1993 , Anderson, 2014 p. 42). Climate change issues can be framed through a process of selecting certain ideas and being dominant in climate change coverage (Berglez, 2011 p. 451).

Entman (1993 p. 52) defines framing as a process of discovering problems, identifying causes, making moral judgments, and providing solutions. In this

sense, Trumbo (1996 pp, 272-273) uses the framing approach to discover impacts and consequence of, cause of, responsibility for and solutions to climate change issues. In a similar way, Nisbet (2009 p. 15) describes framing as a process of discovering an issue, identifying responsibility, and demanding action.

However, framing should not be considered in a linear way. Climate change issues can be framed in very different ways. Two competing camps are divided in the framing of climate change in the US, for example (Nisbet, 2009 pp. 18-20). The conservative camp refuses to recognise an urgency of negative impacts of climate change. They frame climate change issues as scientific uncertainty. The other camp, including environmental activists and scientists, challenges the conservative one by visualising natural disasters and catastrophe such as hurricane and drought (Nisbet, 2009 pp. 18-20).

The existing literature has widely used the 'lumping' framing approach to label climate discourses. As Boykoff (2007 p. 479) finds, the role of balance was decreasing in climate change coverage. In this sense, climate change issues would not be framed simply as climate reality and scepticism. Instead, they might involve various concerns and frames. Therefore, Boykoff and Boykoff (2007 p. 1195) label three frames namely ecological and meteorological, political, and scientific frames for discovering the US media construction of climate change. In terms of their study on UK climate change coverage, Boykoff (2008 pp. 554-557) categorises frames into four types namely ecology, politics and economy, culture and society, and science. Other similar categorisation of frames can be found in the research developed by Horta et al. (2017 p. 5) and Gkiouzepas and Botetzagias (2017 p. 4) including ecology, policy-making, economy and energy, science and technology and civil society.

There are two main limitations of using the 'lumping' framing approach in studies on climate change coverage. Firstly, there is not a clear explanation for how newspapers draw upon different actors who represent the same frame in different ways. For example, according to Nisbet (2009 pp. 18-20), climate change issues are connected with and framed as economic concern by the US conservatives. However, those supporters who call for action on climate change might embrace an economic frame. They put an emphasis on economic growth motivated by clean energy investment. Secondly, these frames are represented

as static but not dynamic. They cannot be used to find how each frame has evolved over time. For example, China has shifted its economic focus on addressing climate change from an economic priority to a positive attitude towards a low carbon economy. Therefore, I employ the constitutive and persuasive framing approach to understand the dynamic process of newspapers constructing climate change issues. On the basis of this, the next chapter will explain why my thesis holds a social constructionist position and an interpretivist approach.

My PhD is built around five dimensions of climate change issues namely economy, energy and emissions, science and ecology, public involvement and responsibility. These dimensions contain a set of different statements reflecting various concerns and issues related to climate change. For example, the economy dimension includes the storylines 'development', 'economic tools' and 'economic opportunity'. The storyline 'development' reflects a strong discourse on prioritising economic development and poverty eradication and fundamental interests of developing countries. The storyline 'economic tools' focuses on a balance between fixing climate problems and sustaining economic development through implementing policies like carbon taxes. The storyline 'economic opportunity' shows a very proactive attitude towards addressing climate change. It links climate change to an economic opportunity raising the importance of low carbon and green economy. Therefore, I do not use the 'lumping' framing approach simply labelling the economic frame. Instead, my research focuses on employing a set of storylines for observing the dynamic processes of constructed climate change discourses.

In addition to a focus on frames, existing studies on climate change coverage consider texts and contexts in terms of framing climate change. Carvalho (2005 p. 1460) conducts a study on framing climate change in the UK newspapers discovering the role of social actors in shaping coverage. Texts refer to the basic elements such as size, themes, news sources and discursive strategies in the newspapers. For example, Grundmann and Krishnamurthy (2010 p. 145) focus on the frequencies of the terms 'global warming' and 'climate change' in the coverage of the US, the UK, France and Germany. Contexts refer to discussing how key political, scientific and social events motivate and drive climate change coverage (Carvalho and Burgess, 2005 p. 1461). The events

include critical policy moments such as the creation of the Kyoto Protocol and extreme weather events. Boykoff and Boykoff (2007 pp. 6-12) use these events to test links between climate change coverage and social issues and contexts. They find that extreme weather events and political events such as the 1992 Earth Summit contributed to the rising number of climate change articles.

However, other studies discover that events do not exactly mean triggering the coverage. As Gavin et al. (2011 p. 424) imply, the discursive link between flooding and climate change is not straightforward but is very complicated. Broadbent et al. (2016 p. 6) stress an association, rather than a causal link, between the coverage of the IPCC report and the implementation of mitigation policies. Therefore, I look at a dynamic process of constructed climate discourse rather than test a causal link between events and coverage.

Studies on climate change coverage and framing also consider temporal and spatial contexts. Boykoff (2008 pp. 554-557) and Carvalho (2005 p. 5) employ diachronic and synchronic analysis as a framework for understanding the development of framing climate change. The synchronic analysis refers to comparing and contrasting different contents and sources at a certain time. The diachronic analysis is used to discover how the contents have changed over time (Carvalho, 2005 p. 3). Carvalho (2005 p. 19) finds that the climate change discourse changed from a scientific topic in the 1980s to political issues in the end of the 1990s in the UK newspapers. Although I do not simply look at a discursive shift in the general topics, my PhD research employs diachronic analysis for understanding dynamic constructed climate change discourses and synchronic analysis for the nature of constructed discourse networks across time in different newspapers in China.

These existing studies to a great extent use content analysis to consider climate change coverage and journalistic norms. However, Anderson (2015b p. 379) stresses the importance for future work to explore how various social actors are used as news sources in media.

## **2.5 News sources and claim-makers**

As Carvalho (2008 p. 164) suggests, media discourse analysis implies the importance of understanding discursive strategy of various social actors and citations of news sources in media.

Claim-makers are defined as quoted sources cited in media including scientists, governmental officials, pressure groups, business actors and international organisations in the process of framing issues (Trumbo, 1996 p. 272). There are two main features of representation of social actors cited in media. On the one hand, various social actors make sense of issues from their perspectives. On the other hand, they have to be selected and filtered by journalists of newspapers (Carvalho, 2008 p. 167). Therefore, it is necessary to discuss the relationship between media and news sources.

Different social actors might have different strategies and purposes in making claims about climate change issues. The potential for being selected as a news source among these actors is unequal (Hansen, 2010 p. 45). Hansen (2015a p. 33) states that journalists rely on scientists and experts in the process of environmental coverage. However, the relationship between media and academic community is not configured in a linear way. While scientists are seen as news sources of scientific knowledge by media, they have to be more or less cited to be in competition with politicians (Dunwoody, 2015 pp. 68-69). Trumbo (1996) discovers that political actors had replaced scientists being selected as dominant news sources in the US climate coverage since the late 1980s.

Political leaders and politicians are seen as the most influential actor in mediating and affecting climate change coverage (Carvalho and Burgess, 2005 p. 1458, Anderson, 2015a p. 177). Governmental officials can provide information for meeting the demands of journalists and they thus become the routine source for journalists (Anderson, 2014 p. 43). These officials have access to professional information and knowledge as they are in charge of environmental and resources affairs (Sachsman and Valenti, 2015 p. 160). However, governmental officials are not an exclusive news source. Journalists can cite alternative sources such as non-governmental organisations when governments and politicians fail to respond to news events efficiently (Anderson, 2015a p. 178). The alternative sources such as academic communities and pressure groups can gain attention from media through organising professional environmental and climate change courses and workshops for journalists (Friedman, 2015 p. 153).

Environmental non-governmental organisations complain about their weak voices and representations in traditional media such as newspapers (Anderson,

2014 p. 53). During the period of the 2009 Copenhagen climate change conference, in contrast to international organisations and national governments, environmental groups received less attention from media and were infrequently quoted as news sources by journalists (Painter, 2013). While scientists can use scientific knowledge and politicians have information resources for access to media, these environmental non-governmental organisations have to attract attention from journalists through protests and street activities. However, this strategy causes a problem that these groups are likely to be labelled as radical behaviour (Cox and Schwarze, 2015 pp. 76-79). In order to change the stereotype of the radical groups, some serious and influential environmental organisations such as Greenpeace set up a formal operating system such as offices around the world but they still have to compete with other news sources for media attention (Williams, 2015 p. 198).

Business actors do not necessarily share among themselves a consistent statement about environmental and climate change issues. Some deny the reality of climate change while others, such as BP, embrace green and low carbon discourse and have begun to slowly adopt clean energy investments as a business option (Miller and Dinan, 2015 p. 96). Business actors do not have the political power of governments, professional knowledge of scientists and presence of street activities of environmental groups. However, this does not mean that business actors cannot insert their ideas into climate change coverage. They can utilise the journalistic norm of balance to compete with other news sources (Williams, 2015 p. 201).

It is worth noting that these environmental groups and business actors have, to a greater or lesser extent, discursively converged and shared similar ideas with policy-makers (Lester, 2015 p. 392). This can be an opportunity for understanding how these various actors are cited to be within the same group of climate change discourse by the newspapers.

Horta et al. (2017 p. 9) find that international political actors can play a leading role in being news sources of climate change coverage in small countries such as Portugal. This is mainly because climate change coverage in Portugal focuses on events and policies at European and international levels such as the EU clean energy policy and global goal of mitigation (Horta et al., 2017 p. 10).

Media discourse can categorise social actors as different groups of climate change positions and attitudes (Carvalho and Burgess, 2005 p. 1467). Hansen (2010 p. 39) argues that climate change coverage can show a fit between actor's background and its frames and claims such as the relationship between scientists and scientific certainty. However, my PhD research challenges this statement and believes that newspapers cite various actors and produce constructed discourse networks in the climate coverage. For example, business actors and environmental groups might be cited as news sources to embrace a low carbon economy.

## **2.6 Climate change journalism in China**

Due to the Party's controls and market's influences, the media has to serve the official positions while it has to make an effort to seek its autonomy (Yang, 2005 p. 56, De Burgh and Rong, 2010 pp. 11-13). Generally speaking, the influence of the Party declined while the power of the market increased in the structure of the media (Zhao, 2000 p. 6, Tang and Iyengar, 2011 pp. 263-264). On the one hand, given that the media are still controlled by the government, climate change coverage should transmit governmental positions, voices and opinions. On the other hand, an increase in the power of the market should lead the media to have, to some degree, opinions to satisfying requirements for businessman, middle class, and investors in advertisements in newspapers. These opinions can be differed from, but not posing a direct challenge to, the governmental positions and concerns.

Environmental coverage in China has two contrasting features. Tong (2014 p. 350) reveals that environmental coverage in Chinese newspapers critically challenges the existing economic pattern and growth. Conflicts between environmental protection and economic development are discussed in environmental coverage (Tong, 2014 pp. 361-363). On the other hand, environmental coverage helps Chinese governments and markets to achieve economic transformation and sustainable development. While the mass media reveal environmental problems, they can provide support for ideas of developing a low carbon economy (Tong, 2015 p. 65).

However, this does not mean that the Chinese government can tolerate a full range of environmental coverage. The extent to which the government can



tolerate the coverage depends on topics. For example, revealing local pollution might force local stakeholders to implement environmental policies and accelerate economic transformation. However, the topics such as anti-Three Gorges Dam project might damage fundamental national and economic interests and thus this aspect of environmental coverage might receive a low level of governmental support (Tong, 2015 p. 62). Overall, environmental topics are ranked as a low level of political sensitivity, and therefore the environmental coverage can construct various voices and cite different social actors as news sources (De Burgh and Zeng, 2012 p. 1008).

Climate change issues in the Chinese newspapers involve a much wider range of issues and topics than conflicts between the environment and economy. Climate change issues can be linked with financial, environmental, energy, social and moral issues (Geall and Hu, 2011 p. 12). This means that climate change coverage requires various voices and news sources.

It is necessary to discuss the two journalistic norms namely objectivity and balance in the climate change coverage of China. The objectivity norm requires journalists to rely on news sources because they need to collect professional knowledge. Lack of professional knowledge and educational background of science is common to Chinese journalists in terms of environmental and climate change coverage (De Burgh and Zeng, 2012 p. 1009, Geall and Hu, 2011 p. 13). Chinese environmental journalists thus identified scientists as one of main actors and news sources for proving information and scientific knowledge (Geall and Hu, 2011 p. 13, Tong, 2015 p. 122). It is worth noting that scientists and experts cited as news sources are not only from Chinese universities but they also are from other countries such as the US and international organisations such as the IPCC (Geall and Hu, 2011 p. 18).

Governmental officials are seen as one of the main news sources in the climate coverage in China (De Burgh and Rong, 2010 p. 23). However, in contrast to the dominant news sources of officials and politicians in Western climate change coverage, access to official information is not linear and smooth to the journalists in China (De Burgh and Zeng, 2012 p. 1010). This is mainly because Chinese officials considered economic growth to be a governmental priority and they were not interested in providing climate-related information. With the rise of climate change in the national political agenda of China, these officials,

particularly Xie Zhenhua, the top climate negotiator of China, have changed their attitudes and been more open towards the climate coverage particularly since the 2009 Copenhagen Summit (Geall and Hu, 2011 pp. 16-18).

According to Xie (2015 p. 170), business actors and environmental non-governmental organisations have not received substantial attention from media in China. This finding is similar to the studies on developed countries that governmental sources and elite actors have been cited to construct more powerful voices than these business and environmental groups in the climate coverage. However, this finding does not show how these actors are cited in terms of their relationships to a wider range of dimensions of climate change issues. While business actors and environmental groups are constructed as having a weak voice in discussing responsibility, they might involve substantially topics such as clean energy and low carbon economy.

In contrast to the study developed by Xie (2015), other studies of climate coverage of China (Geall and Hu, 2011, De Burgh and Zeng, 2012, Tong, 2015) discover that environmental non-governmental actors are seen as very important news sources by journalists. Journalists can establish stable relationship with NGOs through attending training courses and workshops (Geall and Hu, 2011 p. 22).

In this sense, there are two transparent differences in climate change coverage between China and Western countries. Firstly, environmental NGOs were cited as important, even though not dominant, news sources in climate coverage of China. This is mainly because governmental officials do not consider providing climate change information one of their core tasks. Secondly, while business actors are cited as important actors in the coverage in developed countries, they are not cited as main news sources in Chinese coverage according to studies on climate journalism of China. This reflects both as an artefact of methodologies used in extant studies as well as the role of business in China. The primary reason is that interviewing journalists is employed as the main research method in these studies. This method can help reveal journalistic norms and practices but it is not sufficient to show the specific selection of news sources. Empirical data collected from newspapers can address this insufficiency. The secondary reason is that business actors in China are not

blamed for mitigating climate change as they have much lower historical emissions than their Western counterparts.

Another main journalistic norm is balance. There are three distinctive features of balance in Chinese climate change coverage. Firstly, Chinese journalists struggle for a balance between climate protection and national interests. Like those studies on Western countries, Xie (2015 p. 157) use framing analysis to reveal how two key Chinese newspapers namely *People's Daily* and *China Daily* identify problems, causes, moral judgments and solutions in terms of climate change issues. These two newspapers show the dominant frames of domestic action and Western historical responsibility in climate change coverage in China (Xie, 2015 p. 171). They reflect governmental positions and national interests. Geall and Hu (2011 p. 23) state that journalists are engaged in undermining conflicts between addressing climate change and supporting national interests.

Secondly, newspapers have to avoid using single news source. While environmental NGOs have to compete for media attention in Western countries, they are substantially cited by journalists in China (Geall and Hu, 2011 p. 37). De Burgh and Zeng (2012 p. 1016) emphasise that Chinese media should use various sources rather than relying on the environmental NGOs such as Oxfam and Greenpeace. However, the existing studies fail to show how these environmental groups are cited in and what claims are linked with them in newspapers in China. My PhD research makes a contribution to discovering how and why these environmental NGOs, such as Oxfam and Greenpeace, can be cited in the climate change coverage in China which is not a Western democratic system.

Thirdly, they are engaged in explaining, rather than simply demonstrate, controversial topics such as climate scepticism. Painter and Gavin (2016 p. 447) state that while the sceptical perspective of climate change increased in the UK and the US due to the 'Climategate' event, this trend was not found in China. However, Midttun et al. (2015 p. 1281) find that Chinese media showed the existence of climate change scepticism in 2010. Being different to Western journalists, Chinese media focus on political controversies behind the 'Climategate' event rather than simply showing debates between scientists and climate denials (Geall and Hu, 2011 p. 25).

## **2.7 Climate change coverage in China**

The Chinese government launched a wide range of environmentally-friendly projects such as 'Fighting Environmental Protection' in 1993 and 'Clean Drinking Water' in 2005, inviting journalists to record and report them (Yang and Calhoun, 2007 p. 221). Climate change coverage has been conducted in China in order to provide and communicate climate-related information and knowledge to the public (NDRC, 2010 p. 43). Existing literature on Chinese climate change coverage focus on the scope of the media reporting, the role of the media in agenda-setting, and the comparison of frames between Chinese and other countries' media.

### **2.7.1 The scope of climate change coverage**

There is very little research on climate change coverage in China despite a number of scholars involved in studying this topic in the Western countries including some European countries and the USA (Xie, 2009 p. 17). Due to the language and content in Chinese newspapers, western scholars have rarely focused on Chinese climate change media. There was no study on Chinese climate change coverage until 2007 when Sandy Tolan launched the first relevant research (Xie, 2009 p. 17).

Tolan (2007 p. 2) focuses on an assessment of the scope of Chinese climate change coverage. This study reveals the features of Chinese media with regards to climate change issues. Among national media including *China Business News*, *Global Times*, *People's Daily*, *Southerncn*, and *Xinhua News Service*, nearly 90% of their news articles were translated from foreign media or international coverage. In 2006, there was only approximately 10% of news articles related to regional impacts of climate change. Since the end of 2006, the Chinese media had witnessed a rising concern about climate change issues and an increase in the number of climate news articles concerning the IPCC report in 2007 (Tolan, 2007 pp. 4-6).

Tolan's study gives a description that the Chinese media changed their attitudes towards addressing climate change in a proactive way due to the IPCC report in 2007. However, the change in climate change coverage cannot demonstrate that the IPCC report had directly influenced the media and the journalists who report climate-related news. The change might be caused by changes in

governmental attitudes and other claim-makers' opinions represented in the Chinese media. Also, it is not surprising that the Chinese media reflects governmental opinions because of the nature of Chinese state-owned media system. But this does not mean that the Chinese media would ignore opinions from non-state actors such as scientists when reporting climate-related news.

### **2.7.2 The role of the media in agenda-setting**

The media also reflects the mechanism of agenda-setting concerning climate change scientific issues and contributes to having influences over some universities and institutions. As a result of this, the media has become an area in which climate experts discuss and exchange. This phenomenon requires journalists to keep close to academic people in the field of climate change study (Wübbeke, 2011 p. 19). In terms of scientific discussions about climate change, as Wübbeke (2011 p. 20) shows, the Chinese Academy of Sciences (CAS), Tsinghua University, Peking University, and the Chinese Academy of Social Sciences (CASS) are the main universities and research institutions identified in news articles on Xinhuanet in 2009.

It is clearly reasonable that academic institutions maintain the important role in discussing climate change in the mass media because it relates to scientific issues. However, existing literature fails to include other actors involved in climate change coverage. Therefore, this PhD thesis has an exploration of various actors cited in Chinese climate change coverage.

### **2.7.3 Comparative study of climate change coverage**

Xie (2009 pp. 24-25) conducts research on the comparison between China and the USA in terms of climate change coverage through analysing newspapers and bloggers. The research reveals that compared to the US media, Chinese climate change coverage reflects little scepticism. Chinese newspapers pay more attention to domestic mitigation achievements than international efforts to mitigate emissions. As the US coverage shows discursive conflicts between different social actors while the Chinese media highlights the impacts of climate change (Xie, 2009 pp. 138-140). Also, the Chinese media are in accordance with the Chinese government, asking developed countries to fulfill their commitments to mitigation and provide financial and technology support to the developing countries (Xie, 2009 pp. 142-143) .

Wu (2009 pp. 165-171) puts an emphasis on discovering three climate change discourses in China and other developing countries, the USA and Australia, and European countries and Japan. These three discourses focus on different responsibilities for climate change between developed and developing countries, per capita and aggregated emissions, and China's role in climate issues.

These studies show the differed discourses about climate change issues between media in China and in the rest of the world. However, these studies do not show how the Chinese media construct the climate change issues into various dimensions such as economy and responsibility and cite various actors in the coverage.

Yi-jun et al. (2011 pp. 6-7) compare the climate coverage around the 2009 Copenhagen Summit between *the New York Times* and *China Daily*. These two newspapers share a positive attitude towards addressing climate change. And they both focus on reporting economic issues and criticising other countries. However, their fundamental difference is the different understandings of fairness and responsibility for addressing climate change. Also, *China Daily* prefers using national sources such as official documents while *the New York Times* shows a diversity of information. This is because the former one is state-owned and the latter one is operated independently (Yi-jun et al., 2011 p. 7). However, this does not mean that two newspapers have similar understanding of addressing climate change. For example, China might focus on its rapid economic growth and the US is concerned about its economic recession. They have different concepts about economy related to addressing climate change although both attach climate change issues to economic concern.

In summary, none of these studies compare climate change discourses across the three different newspapers in China and explore the links between storylines constructed in and various actors cited in the coverage. Therefore, this PhD research explores the constructed climate change discourse and the citation of the actors in the newspapers in China.

## **2.8 China's media system**

Before providing a rationale for selecting newspapers as main data sources, it is important to discuss China's media reforms. The nature of the media system determines the selection of newspapers.

### **2.8.1 Transitions in China's media**

There are a wide range of studies on Chinese media's transition from being state owned to marketised placing an emphasis on the relationship between the state and the market (Zhao, 2000 p. 5, Luo, 2015 pp. 52-53). The Chinese media are considered a link between the Party, the government, and the people. The Party owns, manages and operates the media (Sun et al., 2001 p. 204). Before the era of economic reform, the publishing of newspapers depended on official commands rather than market demand (Sun et al., 2001 p. 204, Zhao et al., 2012 pp. 149-150) .

With economic reform, the structure of the Chinese mass media changed dramatically through its regulation, commercialisation and partial privatisation (Stockmann and Gallagher, 2011 pp. 438-440). Due to the economic reform, local governments have, to some degree, an authority over media's management such as media staff arrangement (Stockmann and Gallagher, 2011 pp. 438-440). Furthermore, as a consequence of the gradual reform, advertising revenues, rather than governmental subsidies, are the main incomes of the Chinese media (Stockmann and Gallagher, 2011 pp. 438-440). Since 2002, moreover, the Chinese media have become partially open to non-state investments (Zhao, 2004 p. 179). These changes are considered to have facilitated marketisation of the media (Stockmann and Gallagher, 2011 p. 440).

Economic reform causes the relaxation of controls over the media (Wu, 2000 pp. 47-48, Stockmann, 2013 p. 58). With the fragmentation of the Chinese political system (Lieberthal, 1992), provincial and sub-provincial media receive less control directly from the central propaganda system.

Akhavan-Majid (2004 p. 557) suggests that due to an increasing number of Chinese entrepreneurs, the demand of investments in media has increased since the mid-1990s. A printed paper can be operated under the ownership of a government and an official organisation, by the supervision of the Propaganda Department, and with a responsibility actually undertaken by private investors

(Akhavan-Majid, 2004 p. 557). In other words, private investors can run a paper which is owned by the license holder e.g. an official association, and which is supervised by the Propaganda Department. Although the market plays an important role in the media, it is not to say that the Chinese government is losing its powerful control over the media.

### **2.8.2 The propaganda system in China**

Despite economic marketisation, social liberalisation and political decentralisation, the Party maintains a significant role in the Chinese media through the censorship by the Department of Propaganda of the Party (Zhao, 2004 p. 179). While China has become involved the process of globalisation, the propaganda system continues to play an important role in controlling, managing and filtering information (Shambaugh, 2015 p. 101).

‘China’s propaganda system (xuanchuan xitong) is a sprawling bureaucratic establishment, extending into virtually every medium concerned with the dissemination of information (Shambaugh, 2007 p. 27).’

As the quotation above shows, this system is responsible for supervising the media which can transmit any information (Shambaugh, 2007 p. 28, Shambaugh, 2015 p. 101). While the Chinese Communist Party Propaganda Department (CCPPD) still plays its original role in controlling media after the economic reform, it was renamed as the Chinese Communist Party Publicity Department (CCPPD). The CCPPD uses so-called self-censorship so that editors and journalists know which aspects of news can or cannot be reported (Shambaugh, 2007 p. 29). They know what their limitations are when reporting news. Even though the propaganda system does not provide a specific ban on certain news reports, people working in the media are able to ensure that the content of news reports would not exceed the limitations (Shambaugh, 2015 p. 104).

The CCPPD is responsible for supervising ‘the Ministry of Culture; General Administration of Press and Publications; Chinese Academy of Social Sciences; People’s Daily; Bureau of Broadcast, Film and Television; New China News Agency and its affiliates; and all Party propaganda cadres at the provincial and sub-provincial levels’ (Shambaugh, 2007 pp. 36-37). It is important to note that the *People’s Daily* is an official newspaper under the supervision of the CCPPD.



Also, the CCPPD has close relations with the General Administration of Press and Publications (GAPP) which is a governmental body led by the State Council of China (Shambaugh, 2007 p. 40). The GAPP is guided by the CCPPD in the field of ideology (Shambaugh, 2007 p. 40). It was established to undertake the responsibility of controlling the print media such as the licensing system (Zhao, 2004 p. 180, Tang and Iyengar, 2011 pp. 1-2).

## **2.9 Identifying newspapers as main data sources**

This research mainly employs newspapers as main data sources. Also, specific policy documents (see Chapter 1) and official statements from various actors (see Chapter 6) around the critical policy moments are used to strengthen the discourse research.

### **2.9.1 Why selecting newspapers?**

Selecting newspapers rather than other sources to analyse is a conscious choice that fits the purpose of my research design. While other online and social media are emerging, newspapers remain an important role in communicating information and agenda-setting with large readerships (Painter, 2013 pp. 64-67). This section explains why this research uses newspapers rather than a big number of policy documents and other mass media such as TV and the Internet as the main data source.

Firstly, in the context of Chinese politics, compared to governmental data, which can be used to observe the shifting of policies (Chen, 2010 pp. 17-18), newspapers can provide a broader discursive space of understanding climate change politics (Lo, 2015a p. 101). Unlike democratic countries, China is an authoritarian country. Public debates with different political parties in the Western parliaments do not exist in China. Unlike Select Committees and Parliament in the UK, the National People's Congress (NPC) fosters a relationship with the Communist Party of China like a 'master-servant' (Guo, 2012 p. 144). While the government is supervised by the NPC on paper, the Congress indeed is responsible for passing the decisions made by the Party and ratified by the government in China (Saich, 2011 p. 152). In this sense, the governmental data including parliamentary documents can help political researchers consider the issue from the perspective of the Chinese government

(Chen, 2010 p. 17). However, it cannot make a contribution to revealing the representation of various actors cited in climate change discourse.

Secondly, the Chinese people recognise media through categorising the media sources (Stockmann and Gallagher, 2011 p. 441). There are multiple types of media including television, radio broadcasting, newspapers, magazines and the Internet. The vertical management of propaganda system keeps television and radio under control (Zhao, 2004 p. 194). The vertical power can effectively reduce the financial dependency of television and radio over local governments. This raises central and provincial control over them. Unlike newspapers, television and radio receive tight control and management processed by the central and provincial levels. The transmitting effectiveness causes the broadcasting sector to receive strict control over its news reporting (Brady, 2006 pp. 63-64). Therefore, the television and radio broadcasting should not be selected as the data source.

Compared to television and radio broadcasting, the Internet receives less tight governmental control. The Internet could be an effective tool of searching for relevant data. Carlson and Duan (2010 pp. 90-105) describe how to use online sources, such as official websites of governmental agencies, to collect data concerning China's foreign relations. Also, the Internet could be considered a discursive space of public debate (Mou et al., 2011 pp. 342-343). However, the Internet has a high level of marketisation and has a low intensity of state control, and it is thus equivalent to the most commercialised papers (Stockmann and Gallagher, 2011 p. 441). The Internet can show a wide range of public opinion and it therefore does not necessarily reflect official discourses. It is in this sense that the Internet is not a suitable platform of observing the constructed discursive evolution around policy moments.

Newspapers are identified as official and commercialised papers in China. Institutionally, official papers are considered the mouthpiece of Party and political organisations. Commercialised papers have higher status in a press group with a more open attitude towards news reporting (Stockmann, 2013 p. 68). Financially, commercialised newspapers have a heavy reliance on revenue from advertisements and sales, while official papers can receive financial support through subsidies and their 'son-papers' (Stockmann, 2013 p. 68).

When it comes to investments in media, newspapers are more popular than broadcasting, and commercialized papers are more popular than official papers. This is because investors prefer the media which has a wider scope of news report. In terms of operation, official papers have a low level of satisfying audience while commercialised papers have an inclination towards readership (Stockmann, 2013 p. 69).

### **2.9.2 Selecting *People's Daily*, *China Daily*, and *Southern Weekend* as data sources**

Selecting newspapers for analysing dynamic constructed climate change discourse of China should be in accordance with the nature of climate change issues, the structure of the Chinese political system, and the nature of the Chinese media system. Newspapers are, to varying degrees, government-controlled in China. The criteria of selecting *People's Daily*, *China Daily*, and *Southern Weekend* are as follows:

Firstly, climate change issues involve economy, energy and emissions, public participation, science and ecology and responsibility. Therefore, the selected newspapers should cover a wide range of relevant information and various actors. Secondly, climate change remains an issue mainly discussed at the national level. The selected newspapers should be published at the central level or be circulated nationwide providing the space for debating the climate change issues of China. Thirdly, the selected newspapers should be influential in terms of climate change coverage. And, the selected papers should involve various discourses and different news sources including international organisations, business industries, NGOs, and academic institutions.

In terms of selecting data sources, it is very important to use representative newspapers (Stockmann, 2010 p. 113). In this sense, this research selects an official newspaper with undertaking the mouthpiece of the Party, an official newspaper with having a wide space of news reporting, and a non-official newspaper with commercial motivation (see Table 2.1). *People's Daily* is an official paper in line with official statements undertaking the mouthpiece of the Communist Party of China. *China Daily* is an official paper but it is relatively open in terms of the space of news reporting (Brady, 2006 p. 65, Shambaugh, 2007 p. 50-51). *Southern Weekend* is categorised as a commercialised paper

and it is relatively open in terms of the space of news reporting (Stockmann, 2013 p. 72). Since commercialised papers do not have the role of being a governmental mouthpiece like *People's Daily*, the top left cell in Table 2.1 is empty. However, it is worth noting that independent newspapers being absolutely open towards news reporting do not exist in China.

**Table 2.1 Categorisation of the selected representative newspapers for analysing dynamic media climate change discourse in China**

Typology of papers Space of news reporting	Commercialised Papers	Official Papers
Closed		<i>People's Daily</i>
Relatively open	<i>Southern Weekend</i>	<i>China Daily</i>

There is not an independent and authoritative agency that calculates and verifies the circulation of newspapers in China (Cho, 2007 p. 10). The World Association of Newspapers and News Publishers is merely able to provide the circulation and readership of the top 20 newspapers in 2012 and the readership of the top 15 ones in 2013 in China (WAN-IFRA, 2015). Therefore, I introduce the selected newspapers based on existing literature and studies.

### 2.9.3 Selecting *People's Daily* as a data source

*People's Daily* is an official newspaper and mouthpiece of the Chinese Communist Party at the central level. Its first issue was published in 1946 (Eastview, 2015). Also, *People's Daily* is the most influential newspaper in China (Pressreference, 2015). It undertakes the task of propagandising people by releasing theory, policy, decisions and information by the Chinese Communist Party (PeopleDaily, 2015). As the quotation below shows, because of its significant status and function, *People's Daily* receives stringent and direct supervision under the Chinese propaganda system.

‘The CCP Propaganda Department also has direct responsibility for overseeing all provincial and municipal dailies, as well as *People's Daily*, *Liberation Army Daily*, *Guangming Daily*, *Economic Daily*, *Workers ' Daily*, *Farmers ' Daily* and *China Youth Daily* (Shambaugh, 2007 pp. 50-51)’.

*People's Daily* maintains a different status from other newspapers. While other central-level newspapers, like *Guangming Daily* and *Economic Daily*, were operated in the form of a conglomerate, *People's Daily* remained unchanged

(Zhao, 2004 p. 193). Therefore, *People's Daily* remains in accordance with official statements reflecting the voice of the Chinese Central Government and the Communist Party of China (Stockmann, 2011 p. 21).

#### **2.9.4 Selecting *China Daily* as a data source**

While *China Daily* is an official and national newspaper, it has a wider space of news reporting than other official newspapers such as *People's Daily* (Stockmann, 2013 pp. 71-72). The China Daily Group publishes several international regional versions of *China Daily*. However, this PhD thesis selects the version of *China Daily* published and circulated in China namely Chinese Mainland (excluding Hong Kong).

This newspaper was founded in 1981 and it is published in English. Chinese readers take up 40% while foreign readers account for 60%. The readership in Chinese mainland includes general managers, CEOs, governmental officials and scholars (ChinaDaily, 2013 p. 9). Therefore, the readership of *China Daily* is a mixture of Chinese and foreigners in China. It provides a platform of communicating various discourses and citing different social actors.

There are three reasons why *China Daily* is selected as a data source.

Firstly, *China Daily* is permitted to operate news services, such as translating foreign news and selling them to domestic news agencies, that other newspapers cannot be allowed to do (Brady, 2006 p. 65). Brady (2006 p. 65) thinks the privilege of *China Daily* is granted by having a strong connection with the State Office of Foreign Propaganda and receiving weak control exerted by the Central Propaganda Department.

Secondly, *China Daily* is a comprehensive newspaper of China published in English. It covers a wide range of information, analysis and comments in terms of China and international issues (ChinaDaily, 2014). Compared with those newspapers of favouring economic and financial news such as *Economic Daily* and *21<sup>st</sup> Century Economic Report*, *China Daily* is a more comprehensive newspaper. This helps to understand the complexity of climate change issues with various dimensions such as economy, security, energy and international relations.

Thirdly, *China Daily* plays a proactive role in climate change coverage. It provided an assistance to hold the annual meeting of the Asia News Network with a focus on climate change in 2010 (ChinaDaily, 2010). Also, *China Daily* became the founder member of Climate Publishers Network strengthening cooperation with other newspapers such as *the Guardian* in the UK (CCChina, 2015).

#### **2.9.5 Selecting *Southern Weekend* as a data source**

*Southern Weekend* is a comprehensive newspaper issued weekly and circulated nationally. It was founded in 1984 with a slogan namely 'understanding China here' (INFZM, 2015). While *Southern Weekend* is published in Guangdong Province, it is circulated nationwide. It uses sensational news stories to attract readers and is thus popular among the middle class in China (Cho, 2007 p. 10). Cho (2007 p. 10) suggests the number of circulation of *Southern Weekend* is approximately 1.3 million. According to its official website, *Southern Weekend* claims its circulation is over 1.7 million (INFZM, 2015). Its readership is nearly 4.9 million in 2013 (WAN-IFRA, 2015).

There are four reasons why *Southern Weekend* is selected as a data source.

Firstly, Compared to other newspapers published by the provincial media group, *Southern Weekend* is circulated nationwide (Stockmann, 2013 p. 52). Being an urban and commercialised paper, *Southern Weekend* raises its voice and reshapes discussions on social problems (Zhao and Xing, 2012 pp. 44-45) and satisfies the expectation of readers (Lv, 2014 p. 16).

Secondly, *Southern Weekend* is described as a leading role in watchdog journalism, and is also the most outspoken newspaper in China (Cho, 2007 p. 10). For example, *Southern Weekend*, which is not an official newspaper at the central level, successfully interviewed Obama, the President of the USA (Xiang and Zhang, 2009). This case indicates that *Southern Weekend* plays a leading role in influencing agenda-setting of commercial media in China (Zhao and Xing, 2012 p. 31). In 2013, *Southern Weekend* attempted to publish an article after the New Year. This article discusses about the significance of sustaining and respecting the constitution. However, the Propaganda Department in Guangdong Province expressed strong resistance to this (Ng, 2013).

Thirdly, *Southern Weekend* is based in Guangdong Province and it thus avoids criticising the provincial government, and moves its attention towards other regions such as Sichuan (Wang, 2009 p. 141). This causes *Southern Weekend* to have a large space for news reporting (Wang, 2009 p. 141).

Fourthly, *Southern Weekend* is one of newspapers making influential environmental coverage in China (Tong, 2015 p. 56). It made a series of environmental investigative reports, exerted the first critical voice of the adverse effects of the Three Gorges Dam over ecological system, and created the 'Green Page' to conduct environmental coverage (Tong, 2015 pp. 55-58).

## **2.10 Conclusion and research gap**

Existing literature shows that climate change issues have been framed across consequence, cause, moral judgements and solutions (Trumbo, 1996) and they also have been revealed across the meteorological, ecological, scientific, political, cultural, social and economic frames (Horta et al., 2017, Boykoff, 2008). However, these frames can be interpreted as different issues and concerns. Nisbet (2009 pp. 18-20) finds that while an economic frame can be understood as economic priority, it might be interpreted as investments in clean energy. In this sense, it is important to identify specific ideas about frames.

Existing literature also shows that political, meteorological and scientific events can contribute to the rising climate change coverage (Boykoff and Boykoff, 2007, Carvalho and Burgess, 2005). However, Gavin et al. (2011) stress that the discursive link between flooding and climate change is a complicated but not straightforward process. In this sense, Broadbent et al. (2016) focus on discursive associations, rather than causal links, in the climate change coverage. My PhD research therefore does not look at causal links between events and the coverage but it focuses on a dynamic process of constructed climate change discourses in the newspapers in China.

There are four main reasons why my PhD research can make a contribution to existing knowledge. First of all, in contrast to existing studies on framing and content analysis, a discourse analysis approach pays less attention to climate change coverage. The term 'discourse' is simply linked with political reality in a real world. Unlike my study, the existing studies do not attempt to discuss constructed climate change discourses and various actors cited in newspapers.

Secondly, the act of revealing climate frames is not sufficient to understand specific ideas and statements. For example, an economic frame cannot at all reflect two competing positions between prioritising economic development and promoting clean energy investments, because it lumps them together. Thus, it can be understood as a raft of various ideas including economic priority, low carbon finance and energy consumption. Therefore, exploring specific ideas and statements is vital to understanding how climate change issues have been dynamically constructed in the media.

Thirdly, Schmidt et al. (2013 p. 1234) stress that climate media research should pay more attention to the case of developing countries. Many developing countries such as African and Island nations are most vulnerable countries to climate change. Their voices should not be ignored by study on global climate change discourse and coverage. Particularly, China is a leading economy and the largest greenhouse gases emitter.

Last but not least, most studies on climate change coverage focus on the periods around the 1997 Kyoto Protocol (Carvalho and Burgess, 2005, Boykoff and Boykoff, 2007, Boykoff and Boykoff, 2004) and the 2007 fourth IPCC report and the 2009 Copenhagen climate change summit (Schmidt et al., 2013, Painter and Gavin, 2016, Gkiouzepas and Botetzagias, 2017). It is important to update studies on current climate change coverage and discourse particularly after the 2009 Copenhagen summit (Horta et al., 2017) and the 2015 Paris Climate Change Agreement (Christensen and Wormbs, 2017).

The next chapter will explain why this PhD thesis holds a social constructionist approach, critically review existing literature on environmental discourses and demonstrate the important analytical elements namely storylines, actors and dominant discourse networks.



## **Chapter 3: Social constructionism, environmental discourses and discourse networks**

### **3.1 Introduction**

There is a debate over the dichotomy of social constructionism and realism (Dunlap, 2010 p. 28, Hannigan, 2006 pp. 152-153) - whether environmental issues should be discussed from the realist position or they should be understood from the social constructionist approach. While objective ontology tends to pervade environmental social science, social constructionists' critique of such approaches offers new opportunities to examine the role of social construction in researching environmental problems (Dunlap, 2010 pp. 15-28, Hannigan, 2006 pp. 29-33). It is worth noting that Hannigan (2006 p 42) develops the concept of assembling, presenting and contesting as a perspective of observing social construction. However, the present research does not employ that approach as an analytical framework. Firstly, this research considers social constructionism as a perspective of understanding discourses. Secondly, climate change issues have involved various concerns beyond the stage of assembling scientific discussions on climate change. Therefore, my work is on the basis of social constructionism and employs a discourse network approach as a specific analytical tool.

Climate change issues can be researched from the social constructionist perspective using framing (Jamieson, 2013 p. 40) and discourse (Hajer and Wytske, 2013 p. 82). In this sense, the relationship between human society and the environment determines the understanding of climate change (Leyshon, 2014 pp. 359-360). The study of climate change has been shifting from a scientific issue to a mixture of complicated social and political problems (Victor, 2015 pp. 27-29).

Discourse analysis is used to discover dominant and marginalised discourses (Hajer, 1995). Understanding environmental problems depends on the way of 'constructing, interpreting, discussing and analysing environmental problems' (Dryzek, 2013 p. 10). Because of different political and social contexts, this PhD research could contribute new perspectives or dimensions to existing discourses. In other words, it looks at how newspapers construct environmental discourses in a different way in China than in a liberal democracy. In summary, the present research develops around the main

research question: How have climate change issues been discursively constructed and various actors been cited in newspapers in China at critical points over time?

In this chapter, section 3.2 reviews previous literature on the theory of social constructionism. Section 3.3 discusses a social constructivist perspective of understanding climate change issues. Section 3.4 argues about the ontological and epistemological considerations of the social world in this PhD thesis. Section 3.5 elaborates the role of discourse in the social construction of climate change issues identified in the newspapers. This section also explains why and how my PhD thesis borrows the key elements from discourse coalitions approach to make the discourse network approach applicable to the study of constructed discourse networks of the newspapers. Section 3.6 clarifies *discursive structuration* and *discursive institutionalisation* constructed in the newspapers and in the context of China. Putting it simply, discursive structuration refers to constructing links between storylines and various actors cited in the newspapers, and discursive institutionalisation means storylines are constructed to be linked widely to key governmental actors in the constructed climate discourse networks identified in the coverage. Section 3.8 relates the main research question to the discussion of socially constructed climate change issues in China via newspaper constructed discourses and constructed discourse networks using a qualitative and interpretive research method.

### **3.2 Social constructionism**

There is often confusion about the differences between social constructionism and constructivism (Potter, 1996 p. 16). In terms of social psychology, social constructionism and constructivism do not have fundamental difference from each other (Burr, 2003 pp. 19-20). In political and social sciences, ontological considerations can be discussed using either social constructionism (Bryman and Teevan, 2005 p. 13) or constructivism (Moses and Torbjørn, 2012 p. 9). However, the theories of international relations mainly employ constructivism as one of the theoretical frameworks to understand and explain international affairs and global politics (Jackson and Sørensen, 2013 p. 212). This PhD thesis focuses on climate change discourses in the newspapers in China domestically rather than internationally. In order to avoid getting confused, this thesis uses, from here on, the term 'social constructionism' or 'constructionism'.

Social constructionism does not occur as a well-defined school of theory (Lock and Strong, 2010 p. 3). As Potter (1996 p. 2) explains, giving a precise definition to the term of social constructionism is a realist rather than a social constructionist approach. The discussion on social constructionism usually begins from its contradictions to realism (Elder-Vass, 2012 p. 3, Lock and Strong, 2010 p. 8, Gergen, 1998 p. 147, Potter, 1996 p. 5). Social constructionism and realism have totally different ontological considerations. While realism points to the existence of the objective world independently from thinking, social constructionism refers to an ontological position that the world cannot be understood without the elements of social construction such as language and discourse (Elder-Vass, 2012 pp. 3-8).

Berger and Luckmann (1991) demonstrate that social order is considered a reality which exists as an outcome of human activity rather than an objective thing. In this sense, changing the world depends on how people construct the social order through human activity rather than directly re-ordering objective arrangements. Berger and Luckmann (1991) emphasise the role of knowledge in social change. Knowledge is considered a social product determining the social change. Reality does not exist without it being socially constructed through knowledge. In other words, knowledge constitutes 'reality' rather than it simply reflecting the objective world. This is useful for discussing the ontological consideration of climate change issues. For example, the reality of climate change is socially constructed by scientists with scientific discovery and knowledge. Conversely, the denial of climate change can be socially constructed by those who are sceptical about the issue. In other ways, one example is seeing climate change issues as a business opportunity for investment in clean energy and technology by various stakeholders. It is in this sense that the understanding of the existence of climate change issues depends on how it is socially constructed by human society.

Differently from the viewpoint of Berger and Luckmann (1991), Searle (1995 p. 2) does not completely reject the existence of objective reality independently from human subjectivity. The objective things, known as brute facts, exist regardless of human preferences and subjective attitudes (Searle, 1995 p. 2, Searle, 2009). However, some objective facts, which might be called institutional facts, cannot be understood and recognised outside human institutions (Searle, 2009, Searle, 1995 p. 2). Differently from the brute facts, the institutional facts exist in the environment of

social acceptance and agreement. In this sense, human institutions provide a basis for the existence of the institutional facts. For example, according to the basic principles of the UNFCCC, poverty eradication is seen as an important task of developing countries. This perspective of social constructionism attempts to eliminate the tension of ontological positions between realism and social constructionism. But, it causes an ambiguity of a boundary between objective and social ontologies.

It is not sensible to compare realism and social constructionism because of their different ontological positions (Gergen, 1998 p. 150). Gergen (2009 p. 72) demonstrates that the process of social construction starts to work when the discussion on 'what there is' emerges. The ways of understanding a fact depend on how it has socially, culturally and historically been constructed. Also, the meaning of facts varies across different cultural and social systems. For example, while climate change is an agreed scientific outcome among scientists, it could be understood as an uncertain issue by the public. Furthermore, the meaning of facts can be defined differently in different historical contexts. For example, while climate change issues had become an important international affair over the last decades, they did not socially exist in the political debate over 100 years ago. To sum up, Gergen (2009 p. 68) attempts to end the debate over the different ontological considerations through integrating social constructionism and realism into one dimension. However, this still does not escape from an interrogation over the ontological position of social constructionism.

In order to reduce the tension between two ontological considerations, Gergen (2009 p. 68) uses discourse, understood as language and linguistic constitution, to cover the gap between social constructionism and realism. Potter (1996 p. 5) describes that discourse is widely displayed as a central element of social constructionism in social sciences. Potter and Hepburn (2008 p. 276) focus on the 'discursive constructionism' understanding the process of social construction via discourse. Discursive constructionism explores discursive action and practice and ignores discursive institutionalisation (Potter and Hepburn, 2008 p. 276). However, while linguistic meaning is important to understand social reality, Lock and Strong (2010 p. 9) think that the context of the world is more important than language which constructs the reality. In this sense, the context of the lifeworld should exist beyond

the linguistic constitution. The dispute is mainly caused by a simplified and narrow definition of discourse. My thesis thus emphasises the importance of discourse to support social constructionism. Discourse should not be simply considered a consequence of action and practice. It is very important to understand how discourses emerge and have evolved over time.

In an attempt to end the debate over two ontological considerations, Elder-Vass (2012 p. 7) makes realism and social constructionism compatible as much as possible. It seems like a compatible outcome as Elder-Vass (2012 p. 7) called the theory as either 'a realist social constructionism' or 'a socially constructionist realism'. This takes a realist ontological position and focuses on the process of social construction (Elder-Vass, 2012 p. 8). Similarly, Nightingale and Cromby (2002 p. 710) criticise social constructionists for overstating the role of discourse in the reality, and accept realist ontology. Social reality can be understood through discourse but it is not a discursive outcome. Discourse cannot substitute reality. In other words, the ontological consideration of reality is objective, and the epistemological position is social. However, this causes ontological confusion. There is a clear gap between objective ontology and social epistemology. If discourse cannot be considered reality, the extent to which discourse can represent the reality remains unclear. Therefore, the compatibility of social constructionism with realism fails to solve the problem of the debate over social constructionism.

With an effort to bridge the gap between two ontological positions, Wiener (2006 pp. 40-41) employs the duality of structure to understand social constructionism through ideas, norms and languages. Giddens (2013 pp. 2-3) develops the duality of structure looking at the interaction between actors and rules. Actors rely on and reproduce rules. This approach can be used to explain how agency and structure interact with each other particularly through language.

In political science and international relations, some social constructionists believe that the physical reality is important part of the social world (Jackson and Sørensen, 2013 p. 212). Wendt (1995 pp. 73-73) considered material resources such as weapons as part of social structure. However, meaning, understanding, knowledge and expectation are superior to the material resources (Wendt, 1992 p. 402, Wendt, 1995 pp. 73-74). The arrangement of the material resources depends on how they

are defined and understood. Although social constructionism and realism have very different ontological positions, the acceptance of materiality raises a possibility of communicating between them. In this sense, this PhD research is not to challenge the fact that climate change exists materially. However, 'what climate change is' and 'how it is dealt with', which constitute what I call 'climate change issues', depend on the process of social construction with interpretation.

In addition to social constructionist scholars, critical realists try to make the compatibility of social constructionism and realism. Bhaskar (2013 p. 13) observes structure and actual events in a natural scientific experiment from the perspective of realism. The structure of scientific laws can exist independently from the arrangement of actual experimental events. The structure is real on the basis of objective ontology. But, scientists need to use a series of experimental events to perform and make sense of the real structure (Bhaskar, 2013 pp. 12-13). Arranging the events is determined by human activities and can be considered the process of social construction. Therefore, this attempt to revise realism is called 'critical realism'.

Critical realism recognises the existence of reality independently from human thinking and language but also it accepts a view that some parts of the objective worlds depend on the human interpretation (Edwards et al., 2014 pp. 2-3). Houston (2001 pp. 847-848) insists on the perspective of critical realism and criticises social constructionism for overusing discursive practices and losing normative points. However, Houston (2001 p. 848) also emphasises the importance of the role of human subjectivity and meaning in making sense of activity. While the world is real and exists independently from thinking, activity can be enabled by human subjectivity and be understood through meaning.

On the one hand, social constructionists tend to accept the existence of reality independently from human recognition. On the other hand, realists make an effort to critically use the process of social construction to understand the objective world. However, there remains confusion over the ontology of reality. Cromby and Nightingale (1999 pp. 11-12) argue that materiality refers to an objective world which appears in discourse but it cannot be reduced to discursive practice. The physical elements of materials exist independently from human subjectivity. Burr (1998 p. 23)

states that social constructionism is not to challenge the nature of materiality. Therefore, Burr (2003 pp. 101-102) emphasises that social constructionists do not deny the existence of materiality.

This thesis puts emphasis on the social ontology from the perspective of social constructionism. Although the objective existence of materiality is not denied, this thesis emphasises that the reality of the social world is socially, culturally and historically constructed. A social constructionist approach can be used for understanding how climate change issues are socially constructed.

### **3.3 Social constructionist perspective of understanding climate change issues**

Are climate change issues socially constructed? As discussed in Chapter 1, climate change issues involve the economy, energy and emissions, science and ecology, public involvement and climate responsibility. While the IPCC has issued five scientific reports over last 20 years, it is not sensible to deny the existence of climate change and ignore negative impacts over the Earth. Scientists communicate their scientific studies of global warming with their colleagues at the global level, and people receive the information about climate change via mass media at the local level (Boykoff and Smith, 2010 p. 213, Wilson, 2000 p. 217). Some people were not concerned about the danger of climate change until the rise of public awareness of this issue. Other people ignore the problems when accepting the scepticism of the reality of global warming. As Naustdalslid (2011 p. 243) demonstrated, without the scientific consensus and communication from academic community to political and public world, climate change would not be considered an issue. Therefore, climate change issues can be considered a socially constructed outcome on the basis of an ontological consideration and discussion (Leyshon, 2014 p. 359).

The scepticism of climate change exists in a long and wide political debate. McCright et al. (2013 p. 517) explain that the scepticism of the climate reality generates an effect on the public perception of this issue. Also, McCright et al. (2016 pp. 340-343) demonstrate that the public divide over the reality and seriousness of climate change can be found in other Western countries including Australia, Canada, and the UK. The deniers of climate change make an effort to enhance scientific uncertainty (Dunlap and McCright, 2010 p. 255). This demonstrates that climate change is not

simply a scientific discovery which exists as the truth. The scientific consensus of climate change fails to directly and effectively ask the supporter of uncertainty to keep silent. On the one hand, the IPCC reports reveal the serious reality and consequence of negative effects of climate change (Giddens, 2015 pp. 156-157). On the other hand, in 2014, 50% of the US adults believed that climate change is caused by human-induced activity. This number was just a little bit higher than that in 2009 with 49% (Pew, 2015 p. 37). The denying machine of climate change not only makes the public perception divided but also results in weak action on addressing the issues (McCright et al., 2013 p. 517, McCright et al., 2016 p. 351). Therefore, in terms of interaction between scientific knowledge and society, climate change issues should be considered social and cultural concerns and not simply a scientific discussion (Von Storch et al., 2011 p. 125).

Having moved from scientific field to social and cultural debates, climate change issues involve various concerns. The prominent example is the link between economics and climate change. While market failure to address climate change gives a challenge for economics, economic theories are thought to be able to assess the risk and provide solutions to securing economic growth (Stern, 2012 p. 3, Stern, 2007 p. 1). Also, addressing climate change is linked to economic costs and benefits (Dietz, 2008 p. 36). On the one hand, the negative impacts of climate change might cause economic costs. On the other hand, the actions to mitigate and adapt to climate change might lead to concerns about high costs. Recently, the concept of green economy is described as a means of economic development by addressing climate change (Huberty et al., 2011). This concept covers the gap between economic opportunity and addressing climate change (Barbier and Markandya, 2013 p. 1). Compared with those economic concerns, the green economy stands on the moral high ground by accepting the idea of addressing climate change, and meets the requirements of economic growth. Therefore, climate change issues can be understood as not only a scientific issue but also an economic affair.

In addition to economic debates, climate change justice is another category of climate change issues. When climate change issues are tangled with responsibility, they become dramatically complex. According to the principle of 'common but differentiated responsibilities' of the United Nations (UN, 1998 p. 9, UN, 1992 p. 9), developed countries have the responsibility for reducing emissions, while developing



countries have a right of economic development and poverty eradication. However, the dispute over responsibility exists in the debate of climate change issues. China is a prominent example of demonstrating how the responsibility for addressing climate change can be socially constructed. Huaqing and Shengmin (2011 pp. 28-29) explain that China, as a developing country, does not have the responsibility for reducing emissions but it remains a proactive state in terms of addressing climate change. The US is blamed for refusing to undertake the responsibility (Huaqing and Shengmin, 2011 p. 29). Also, Gong (2011 p. 160) demonstrates that China, due to its low per capita emissions, refuses to take the responsibility for compulsory carbon reduction. However, Gallagher (2007 p. 389) reveals that rapid economic growth makes China become one of the biggest emitters of greenhouse gases. The lack of China's role in substantial and collective action causes a failure to the global achievement of addressing climate change and reducing emissions (Harris et al., 2013 p. 293). Giddens (2015 p. 159) emphasises the importance of major developing countries such as India and China to share responsibility for addressing climate change. While the principle of 'common but differentiated responsibilities' of the UN does not require developing countries to reduce emissions, China is seen as having a key role in addressing climate change. Therefore, the climate responsibility can be a dimension of understanding obstacles to global collective action on reducing emissions.

Therefore, my PhD thesis uses a social constructionist perspective for understanding dynamic constructed climate change discourses in the newspapers in China. The next section discusses ontological and epistemological debates around social constructionism.

### **3.4 Ontological and epistemological considerations**

The debate over the recognition of reality has its roots in the discussion of ontological considerations. Also, social sciences involve different epistemological considerations based on the ontological positions. This section explains why my PhD thesis holds a social ontological and epistemological position and employs an interpretivist approach to studying constructed climate change discourses of three newspapers in China.

### **3.4.1 Ontological considerations**

Halperin and Heath (2012 p. 26) describe ontology as a response to 'what is' with reference to a judgement of the nature and constitution of the social world. For natural sciences, it is not difficult to believe that the real world exists independently from human thinking and to recognise the objective reality. However, when entering the discussion of the social world, ontological assumptions become complex (Moses and Torbjørn, 2012 pp. 146-147).

Furlong and Marsh (2010 pp. 184-188) define positivism and realism as the ontological assumption that the social world is not different from the natural world and that reality exists independently from the human subjectivity. This ontological assumption is called the naturalist ontology (Halperin and Heath, 2012 p. 49) or objectivism (Bryman and Teevan, 2005 pp. 12-13). This ontological assumption recognises the objective existence of the social world beyond human thinking.

In contrast to positivism and realism with the naturalist ontology, constructionism, which is also called interpretivism, insists that the social world is totally different from the natural world and cannot exist independently from human subjectivity (Halperin and Heath, 2012 pp. 39-40, p. 49, Moses and Torbjørn, 2012 p. 148). Bryman and Teevan (2005 p. 13) define constructionism as the ontological assumption that human agents create the meanings for understanding the social world through social interaction and communication. The ontological assumption of social constructionism is defined as social ontology (Searle, 2006 p. 13). Social constructionism is used for understanding the social world through interpretation. This is because the different ways of interpretation can lead to various understandings of the world.

Also, Furlong and Marsh (2010 pp. 184-188) describe this social ontological assumption as the interpretivist position. The interpretivist approach does not explore causal relationship between the interpretation and actual consequence (Furlong and Marsh, 2010 pp. 184-188). Therefore, this PhD thesis looks at the dynamic processes of newspapers constructing climate change discourses and discourse networks.

The social ontology refers to recognition of the socially constructed existence. This ontological position raises epistemological consideration of what can social scientists

know and how can they know (Marsh and Stoker, 2010 pp. 184-188, Moses and Torbjørn, 2012 p. 153).

### **3.4.2 Epistemological considerations**

While objectivism recognises the reality as the objective existence, it has different ways of understanding the social world. Halperin and Heath (2012 p. 49) divide positivism into two dimensions, namely naturalism and empiricism. The naturalist perspective refers to the recognition that there is no basic difference between the natural and social worlds. Empiricism means that social and political sciences can induce and deduce theory through scientific measurement (Halperin and Heath, 2012 pp. 28-29).

In addition to positivism, scientific realism and critical realism hold the naturalist ontology with the statement that reality exists independently from human thinking. However, scientific realists believe that the social world, to some extent, cannot be discovered through direct scientific measurement. Social scientists should explore those unobservable elements of the reality establishing the causal mechanism of the social world (Halperin and Heath, 2012 pp. 36-37). Critical realists believe that the recognition of social structure depends on how human activities arrange experimental events (Bhaskar, 2013 pp. 12-13). In sum, positivism and scientific and critical realism support the ontological assumption that the social world exists independently from human subjectivity.

Social constructionism, in contrast to objectivism or the naturalist position, focuses on the meaning and interpretation of the social world (Bryman and Teevan, 2005 p. 10). For researchers with the social ontological assumption, it is very important to understand how the social world is interpreted. Therefore, the epistemological assumption with social ontology is called interpretivism (Bryman and Teevan, 2005 p. 10, Marsh and Stoker, 2010, Halperin and Heath, 2012 p. 49). While social constructionists agree with the idea of interpreting the social world and understanding its meaning, they remain in dispute over the epistemological assumption with social ontology.

Parsons (2010 pp. 80-81) demonstrates that an epistemological dispute over the causal relationship between meaning and behaviour exists among social constructionists. On the one hand, social constructionism aims to understand and

interpret the meaning but not the causality. On the other hand, social constructionism does not refuse to discover the causal relationship between meaning and action. The next section reveals the epistemological disputes and explains why my PhD research employs an interpretivist approach.

### 3.4.3 An interpretivist approach

Although this thesis makes a clear and strong statement of the social ontological and epistemological positions, as Table 3.1 shows, social sciences are rife with disputes over the differences between ontology and epistemology, the adoption of causality and the dichotomy of qualitative and quantitative research.

**Table 3. 1 Typology of ontology and epistemology**

<b>Ontology</b> <b>Epistemology</b>	<b>Social ontology</b>	<b>Objective ontology</b>
<b>Social epistemology</b>	Interpretivist approach Critical policy studies	N/A
<b>Objective epistemology</b>	Narrative Policy Framework (NPF)	Real world exists independently.

While there is a clear boundary of ontology and epistemology between objectivism and social constructionism, Jones and Radaelli (2015 pp. 344-345) challenge this and make a combination of social ontology and objective epistemology. The product of the combination is the Narrative Policy Framework (NPF) with a social ontological position (Jones and Radaelli, 2015 p. 339, Jones and McBeth, 2010 p. 335). However, the NPF holds the so-called objective epistemology through using positivist methods, being compatible with quantitative research (Jones and Radaelli, 2015 pp. 339-345), and testing empirical hypotheses (Jones and McBeth, 2010 p. 329).

Firstly, the claim of the positivist method clashes with its social ontology. The fundamental perspective of social ontology is about the way of understanding and interpreting the social world. In fact, social constructionists do not explore the causal relationship between events, including discursive and objective ones, but do understand how the social world can be interpreted. In this sense, the NPF widens the gap between the ontological and epistemological assumptions (Dodge, 2015 p. 363), particularly using positivist methods, quantitative research, and empirical tests.

Secondly, in terms of epistemology, the NPF seems to be similar to realism (see Table 3.1). Realism refers to an understanding of the social world through exploring unobservable elements and conducting empirical research. But, while realism has a clear ontological assumption that reality exists independently from human subjectivity, the NPF holds the social ontological position. They cannot be compatible with each other in terms of ontology. Thirdly, as Dodge (2015 p. 363) explains, in spite of social ontology, social constructionists could adopt, more or less, the view of objective existence of reality. This thesis adopts social ontology but it does not challenge and deny the objective existence of materiality.

Furthermore, the dispute involves the causality of discourse. Some scholars conduct empirical research establishing the causal mechanism of discourse (Jones and Radaelli, 2015 pp. 349-350) and understanding how discourse affects policy-making (Schmidt and Radaelli, 2004 pp. 200-201, Radaelli, 1995 p. 167). However, the view of the causality confronts a serious challenge posed by Hajer and Laws (2006 p. 7), Lejano (2015 p. 370), and Miller (2015 p. 358). Discourses and narratives can interact with policy rhetoric, and influence, rather than causally affect, policy-making (Lejano, 2015 p. 370). Therefore, the causal mechanism between the discourse and the events has not been and perhaps can never be legitimately established (Miller, 2015 p. 358). In this sense, discourse provides a platform for the interaction of ideas (Lejano and Dodge, 2015), and rearranges and influences discussions (Hajer and Wytse, 2013 p. 83). Therefore, this thesis looks at dynamic processes of rather than causal links within discourses.

It is important to note that there is no fundamental difference between terms 'rhetoric' and 'discourse'. However, this PhD work uses the term 'policy rhetoric' in terms of identifying discursive evolution of climate change policies. This is because rhetoric has been used to understand political positions on policies (Dryzek and Niemeyer, 2008 p. 491) and policy options (Dryzek and Lo, 2015 p. 12). Discourse has a much wider range of texts including newspapers report than rhetoric (Potter, 1996 p. 14). Therefore, my work emphasises the analysis of discourses identified in the newspapers.

Moreover, qualitative research can be compatible with quantitative research for conducting the study with the social ontology (Jones and Radaelli, 2015 p. 345).

Leifeld and Haunss (2012 pp. 382-383) attempt to measure discourse through empirical and statistical research. However, Dodge (2015 p. 363) puts emphasis on the importance of 'how' rather than 'how frequently'. How frequently one word is used does not necessarily demonstrate how serious it is although it can be seen as a measure for the importance of a word or phrase. This is the reason why this PhD work largely qualitatively analyses how various actors are cited in the coverage being linked to storylines. However, my thesis also uses the frequency and numbers of actors and storylines to show the trends in climate change coverage across the newspapers complementing the qualitative research (see Chapter 5 and 6).

In summary, the understanding of the constructed climate change discourse in newspapers should be studied with qualitative and interpretive research but can be supplemented with numbers. Therefore, the social ontology adopted by my thesis is consistent with social epistemology. However, this is not to say that the debate undermines the importance of empirical and quantitative research in social sciences. As Schubert (2015 pp. 372-373) demonstrates, the debate over the gap between qualitative and quantitative research is useful for coping with a large amount of information.

### **3.5 Discourse**

Discourse can be seen as a group of ideas and statements which are used to make sense of social issues in a process of social production and reproduction (Hajer, 1995 p. 44, Hajer and Versteeg, 2005 p. 175, Stevenson and Dryzek, 2012 p. 191). This study therefore focuses on analysing dynamic constructed climate change discourses in the newspapers in China.

#### **3.5.1 What is discourse?**

When it comes to discourse, Hajer (1995 pp. 44-46) considers two approaches, namely social backgrounds and content. On the one hand, discourse focuses on social contexts of making statements, while on the other hand, it relates to the content of the statement. Thus, based on these two approaches, the definition of discourse is outlined as 'a specific ensemble of ideas, concepts and categorizations that are produced, reproduced, and transformed in a particular set of practices and

through which meaning is given to physical and social realities' (Hajer, 1995 p. 44). Putting it simply, discourse reflects contents and social contexts.

Coherence is not considered as a key characteristic of discourse (Hajer, 1995 pp. 44-45). For example, the concept of sustainable development obviously fails to show a coherent story. While this concept is reduced to a minimal level of vagueness through simply claiming a balance between environmental and economic concerns, it remains disputed (Blewitt, 2008 p. 69). Some people may consider sustainable development as the utilisation of technology in balancing the relations between continued economic growth and environmental protection. Other people may attribute sustainable development to moral aspects such as inequality of utilising resources between North and South.

Also, discourse is considered 'a shared way of apprehending the world' (Dryzek, 2005 p. 9). Discourse gives a meaning and relationship to knowledge (Dryzek, 2005 p. 9). Dryzek is interested in exploring how each discourse interprets information and has a typical meaning. Each discourse is distinct clearly from other discourses.

### **3.5.2 Discourse analysis**

Discourse study focuses on the structure and process of discourse, simply favouring language in use, text and the context in which text is used (van Dijk, 1997b p. 2). The study of discourse shifts its attention from structure and process to social actions including social acts and interaction (Van Dijk, 1997a p. 2). This does not deny the need to focus on language, text, and context in the study of discourse analysis, but it gives an opportunity for discovering practical, social and cultural dimensions of discourse. However, this discussion on discourse with the language, text, context and social action takes place in a narrow field.

A wide focus on discourse analysis is a connection between discursive and non-discursive practices (Howarth, 2000 p. 4). In the earlier work of Foucault (2002 p. 48), discourses are considered practices forming what people speak. Discourses also relate to rules of formation pointing out differences between formal statements and actual speaking (Howarth, 2000 p. 7). For example, Foucault (1972 p. 53) rejects an opinion of medical progress caused by technical and institutional change but not shaped by medical discourse (Howarth, 2000 pp. 64-65). In this sense, other non-discursive practices are considered discourse. This basically ignores the

importance of real practices such as institutions. However, Foucault (2003) shifts his view and connects discursive and non-discursive practices in his later work. Discourses are not simply considered practices but they are shaped by non-discursive practices (Howarth, 2000 p. 8).

Other post-structuralists and post-Marxists have different understandings of discourse. Derrida (1978 pp. 278-280) believes that human and social action is internalised in discourse. Laclau and Mouffe (2001 p. 3) think that practices and meanings are embedded and constructed in discourse. These views overstate the significance of discourse and thus ignore other practices.

Conversely, realists and Marxists both emphasise the basis of material resources and insist that an independent existence of the objective world is embedded in the social world (Howarth, 2000 p. 3). In this sense, the importance of discourse is underestimated. Politics becomes material and ideological, which is irrelevant to discourse. These views just consider discourse a tool of demonstrating and explaining rather than understanding politics. Therefore, discourse should be a combination of discursive and non-discursive elements in order to understand politics.

Fairclough develops the approach of Critical Discourse Analysis by considering the role of non-discursive practices and elements (Howarth, 2000 p. 8). This requires analysing political text, speeches and contexts. As Fairclough (2013 p. 3) demonstrates, discourse cannot be understood and explained without discussion of its internal and external relations. Its internal relations refer to a set of interpersonal communication or links between the communicative arena and discursive objects such as language. Its external relations lie between discourse and other objects such as the physical world, people, power and institutions. In other words, without consideration of a set of relations, discourse cannot be seen as an independent entity. Therefore, a set of relations constitute a basis for understanding discourse.

When it comes to the relationships between power and discourse, Fairclough (2013 p. 4) illuminates that they both are partly the same thing. Power can be reflected in an arrangement of institutions through discourse. For example, laws and legal documents are internalised in discourse through language and are used to sustain social order. Thus, this example shows power is discourse. But, this does not mean



that power is completely discourse. Power can be shown in a physical form such as weapons and violent means rather than in discourse.

My work recognises discourse in text and the context. In this sense, I look at the dynamic constructed climate change discourses in the newspapers. Also, I focus on the links between statements constructed in and various actors cited as news sources in the climate coverage in China.

Therefore, environmental discourse analysis can help explain how the constructed discourses have evolved over time. As Hajer (1995 p. 48) demonstrates, there is a lack of research on the subject of making discourse. The next section critically reviews existing literature on environmental and climate change discourses.

### **3.6 Environmental discourses**

The present research primarily contributes to the application of environmental discourse studies to the interpretivist analysis in the context of China. Therefore, discussions about the study of environmental discourses matter in this research. Also, this section discusses existing literature on climate change discourses.

#### **3.6.1 Definition of environmental discourse**

Environmental discourses have been discussed widely in studies, ranging from environmental politics, the appreciation of nature, environmental policy, cultural politics, and power and knowledge (Hajer and Versteeg, 2005). The study of environmental discourses considers nature a subject or an entity in environmental politics. This is commonly embedded in the environmental discourse of green radicalism claiming equality across nature and people (Dryzek, 2013 p. 201). Also, environmental policy has been thought of as a consequence of being widely influenced and dominated by a particular discourse (Hajer and Versteeg, 2005 p. 179). Furthermore, environmental politics requires a cultural perspective to see environmental discourse as a common way of understanding environmental problems (Dryzek, 2013 p. 9). Besides, power and knowledge embedded in environmental discourse reflects the environmental politics (Hajer and Versteeg, 2005 p. 180). Power is not considered an inherent feature of an institution but a consequence of being defined (Hajer, 1995 p. 49). In this sense, creating and developing knowledge is seen as power (Hajer and Versteeg, 2005 p. 181). This

illustrates that a wide range of studies on environmental discourses have different academic purposes and directions.

Milton (2013 p. 23) favours nature and its relationship with people in terms of discussing environmental discourses. There are two types. In one way, nature is considered a source of support to human life, while in another way, it determines human society through its material conditions. However, environmental discourses are simply used to describe how nature is considered to be a set of resources utilised by people. This is too simple to understand complex environmental problems and politics.

Killingsworth and Palmer (1992 p. 11) believe that a failure to address environmental problems can be attributed to a poor identification of issues through discourse. This implies that environmental discourse and the identification of issues becomes key to solving environmental problems. They provide three types of environmental discourses through considering nature in human opinions. Firstly, traditional scientific views play a central role in environmental discourse. This environmental discourse considers nature to be an object of studying, exploring and discovering (Killingsworth and Palmer, 1992 pp. 11-12). This can be helpful in understanding environmental politics in an early stage when environmental problems are discovered, revealed, and identified. But it is not adequate to understand an increasingly complex environmental problem. Secondly, developmentalism becomes a type of environmental discourse when seeing nature as resources. This discourse encourages the utilisation of natural resources with the purpose of development (Killingsworth and Palmer, 1992 pp. 11-12). This discourse also emphasises the power of market and the role of the price in utilising resources. But this discourse is narrow and simply emphasises the relationship between nature and resources, ignoring complex environmental problems and various environmental discourses. Thirdly, on the basis of considering the spirit embedded in nature, environmentalism emerges as a type of environmental discourse. This discourse emphasises an inherent value of nature as ethical considerations extend from human beings to nature (Killingsworth and Palmer, 1992 pp. 11-12). But this is not adequate to explain why environmental discourse matters. Due to its focus on nature, environmentalism ignores other ethical considerations such as climate justice and responsibility. On the whole, these three environmental discourses make a

significant contribution to improving an understanding of environmental problems. But they overstate humans' opinions of nature and the role of nature in environmental discourses. Also, the complexity of environmental problems is simply hidden by these three types of environmental discourses.

Similarly, Herndl and Brown (1996 p. 3) categorise environmental discourses into three types through considering humans' opinions of nature. They think that environmental discourses use language to define the environment and the ways of affecting the environment by human actions. They consider the environment as a product of discourses but they do not deny a fact that environmental problems physically exist in reality. However, environmental discourse cannot record and reflect all of environmental problems and realities. It is not adequate to study environmental politics by simply focusing the definition on human actions towards the environment. Other important considerations such as justice and responsibility should be discussed. Also, Herndl and Brown (1996 p. 10) give three types of environmental discourses including regulatory, scientific and poetic discourse. In the same way, these three discourses focus on relationships with nature. Generally speaking, they are similar with but slightly different from environmental discourse developed by Killingsworth and Palmer (1992 p. 11). Scientific discourse sees nature as knowledge constructed by academic communities. Poetic discourse links nature to beauty, spirit and emotional dimensions (Herndl and Brown, 1996 p. 12). These discourses fail to reveal complicated environmental and climate issues such as rights and responsibilities.

Regulatory discourse sees nature as resources to use, manage, exploit and utilise (Herndl and Brown, 1996 p. 10). Unlike developmentalism discussed by Killingsworth and Palmer (1992), the regulatory discourse is made by the process of decision-making, and thus reflects the dimension of policy. But, this discourse simply emphasises the utilisation of natural resources. Indeed, environmental policies can be implemented for improving environmental quality rather than simply managing natural resources.

Compared with the simple typology of environmental discourses, Brulle (2000) outlines more detailed and specific environmental discourses which are found and analysed in the study of US environmental movements. There are nine

environmental discourses found. They are still not separate from the simple typology of environmental discourses. Of these nine environmental discourses, four still consider nature as resources, and they are: 1) exploitation of natural resources; 2) wildlife management; 3) conservation; and 4) preservation. Three environmental discourses involve ethical considerations, and they are: 1) deep ecology; 2) environmental justice; and 3) ecofeminism. Two remaining environmental discourses are reform environmentalism which protects the ecosystem for human health, and ecotology which claims that the ecosystem is divinely created. Obviously, this reflects a wide range of environmental discourses. However, there are two drawbacks here. Firstly, there is a lack of focusing on the changing nature of environmental discourses. It is important to have a further discussion about how these environmental discourses change, converge and compete with each other over time. Secondly, these environmental discourses just demonstrate what the environmental movements claim and are concerned about, but they do not show which discourse has a greater influence over defining environmental issues. It is also important to consider how they became institutionalised being linked to governmental actors. Thirdly, the subject of making environmental discourse remains understated. These environmental discourses simply reflect different claims and ignore the role of various actors socially represented in a broader range of discursive spaces particularly the media. In that case, it can be used to observe what environmental discourses are made but not be able to understand how these discourses are generated, represented and framed.

Harré et al. (1999 pp. 7-12) provide a new perspective of studying environmental discourses. For them, environmental discourses are divided into two parts namely temporal and spatial ones. Firstly, the temporal one considers the future and the past discourse as an integrated whole, and denies the possibility of discursive change. Secondly, this spatial one emphasises the globalisation of discourse. However, this perspective does not raise the importance of understanding how various actors are represented in the environmental discourses.

Based on various studies on environmental discourses, Hannigan (2006 p. 39) has developed three environmental discourses, namely Arcadian, ecosystem, and environmental justice discourses. These three discourses become prominent at different stages. Arcadian discourse, like the poetic discourse outlined by Herndl and

Brown (1996), was prominent in environmental movements in the early twentieth century. A prominent example is the case of '*Back to Nature*' movements with regard to wilderness. In the 1970s, following this, ecosystem discourse entered into environmental movements seeing nature and the environment as a core element of the ecosystem. These two environmental discourses are not fundamentally different from those with the consideration of nature. In the 1980s, environmental discourse was dominated by environmental justice claiming rights, justice, and equity. After all, the dominant environmental discourse varies over time. Thus, for the most part, the changing nature of environmental discourses can be observed. However, there remains a lack of focus on the subjects being linked to discourses. Also, these three types of environmental discourses, like those discussed above, simply fail to reflect the complexity of environmental problems.

In general, those studies on environmental discourses have several common drawbacks namely the lack of subject, the overstated role of nature, and a narrow range of environmental discourses. Dryzek (2013) therefore attempts to resolve these drawbacks with a new perspective when analysing environmental discourse. In the first place, the subject of making discourse is outlined through emphasising actors or agents (Dryzek, 2013 p. 18). This subject is just simply described as a group of actors or agents such as citizens. In the second place, the range of ontology of environmental discourses becomes much wider rather than solely focusing on nature. In the third place, this study of environmental discourse does not focus on certain countries or issues but develops four types of environmental discourses including problem-solving, survivalist, sustainability and green radicalism (Dryzek, 2013 p. 15). Problem solving refers to adjustments to environmental problems via public policy by democratic governments with environmentalists, market, or administrative state. Survivalism seeks to limit industrial and economic growth (Dryzek, 2013 pp. 15-16). Sustainability is inclined to dismiss conflicts between environmental concern and economic growth. Sustainability contradicts limits to growth because it is not resistant to economic growth. Green radicalism refers to a basic change to current industrial social structures including people and society. These four discourses are not just four parallel elements but exist in, to some extent, competing relations. However, they fail to make a significant contribution to understanding how individual actors are represented in being linked to

environmental discourses. Also, it simply focuses on the creation of environmental discourses, and ignores how actors are linked to various and incoherent discourses. As a consequence, the work of Dryzek (2013) makes a contribution to the study of environmental discourse but remains inadequate for understanding complicated environmental politics and the complex matter of climate change issues.

These studies underpin the importance of environmental discourse in environmental politics. However, these studies are not adequate to reveal the variety and complexity of environmental discourse and politics. Firstly, actors identified in discourses are often overlooked in the studies of environmental discourses. Without considering the role of individual actors, it remains unclear how environmental discourses are shaped. Secondly, nature is overstated in those environmental discourses. This is not to say that nature does not matter but to emphasise that other elements of discourse such as ethical considerations or business should not be hidden. Thirdly, while the typology of environmental discourses exhibits clearly, it fails to reflect the complexity of environmental problems. It is, rather, more of a summary with several types of views and attitudes, but not a network with different actors and discourses. Fourthly, due to a lack of consideration given to the relationship between power and knowledge, these studies fail to discover the interaction of environmental discourses. The interaction of discourses has a function of enabling and constraining discourse (Hajer, 1995 p. 48). Fifthly, because of a lack of the interaction of discourse, the changing of discourse cannot be observed.

Therefore, this research is an application and extension of the approach to studying environmental discourse made by Hajer (1995 pp. 42-72). To an extent, the deficiencies in the literature that I explored above are addressed by the work of Hajer (1995). The subject of making discourse should play a central role in the study of environmental discourse. Various actors can be linked to their own orientation towards, and concerns about, environmental issues and make sense of them, and they even make, more or less, a contribution to the shape of environmental politics (Hajer, 1995 p. 46). Actors can hold different discourses, and are allowed to deny earlier ones and use alternative others (Hajer, 1995 p. 56). Therefore, a key advantage of Hajer's contribution is to consider actors, namely the subject, as an essential element for understanding of environmental discourse. My thesis considers

the subject as actors being cited as news sources and newspapers constructing them in the coverage.

Also, the apparent feature of the typology of environmental discourses is the relative coherence embedded in each type of them. This hides the variety of environmental discourses. As Hajer (1995 p. 45) demonstrates, environmental discourse should not be considered as a coherent story given that many different discourses are involved in environmental issues. Because of the complexity and uncertainty, environmental issues could have been understood and interpreted in different ways. Also, journalists can assemble stories about climate change in multiple and varying ways, too. Thus, it is possible to borrow from Hajer's approach to study the constructed discourse in newspapers. Similarly, climate change has been debated with a wide range of discursive elements such as economy, energy and emissions, public involvement, the environment and ecology, and responsibility. In this sense, climate change is not described as a coherent story, but it is seen in a variety of ways.

Furthermore, change and permanence both are two important features of environmental discourses (Hajer, 1995 p. 56), meaning that analysis of their dynamics through time is critical. Due to focusing on power and knowledge, discourses have a function of enabling themselves and constraining others. In this sense, discourse changes with the process of reproduction and transformation when enabling and constraining. Once the discourse is routinised, it would become permanent (Hajer, 1995 p. 56). The present research identifies dominant constructed discourses in the dynamic process of newspapers constructing climate change issues in China. A dominant discourse, just like a newspaper's constructed dominant discourse, should be linked with a wide range of various actors and particularly governmental bodies cited in coverage.

I have illustrated how, through discussions on dynamic constructed climate change discourse in China, this research borrows key elements of the analytical framework of environmental discourses developed by Hajer to apply them to the case of newspapers coverage in China.

### **3.6.2 Climate change discourse**

Studies on climate change discourse analysis and discourse networks remain limited (Bulkeley, 2014 p. 961). This is not to say that discourse analysis and climate

change politics have not yet met each other. Rather, in most cases, relevant studies focus on mass media and communication of climate change. Antilla (2008 p. 3) provides a detailed review of media coverage of climate change and summarises a wide range of the relevant studies on scientific journalism, media coverage of environmental risk, public understanding and communication of climate change. Also, Schmidt et al. (2013 pp. 1234-1237) review a wide range of studies on newspaper coverage of climate change in 27 countries. They use newspapers from 27 countries to study the link between media attention and effects in terms of coverage of climate change. While journalistic studies of climate change are abundant, there is little in-depth understanding of the constructed climate change discourse networks containing storylines and news sources in the newspapers (see Chapter 2). As I argue in my own published work, it is very important to show the interaction and development of constructed climate change discourses (Wang, 2016).

Media discourse of climate change can be used to study the interaction of politics and discourse (Boykoff, 2008 p. 549), cultural-political circuits (Carvalho and Burgess, 2005 p. 1457), claim-makers and frames (Trumbo, 1996 p. 269), and the role of scientific knowledge (Carvalho, 2007 p. 223). Weingart et al. (2000 pp. 262-263) focus on climate discourse across scientific, political, and media spheres.

Compared to studies of climate change discourse around the world, the case of China has received less attention. This situation does not reflect the existing role of China in international climate change negotiations and the GHG emissions of China in contributing to climate change. Being similar to those around the world, studies on climate change discourse in China have a close link with media research. There are some studies on the frames of climate change in the Chinese media (Xie, 2009 pp. 24-25, Wu, 2009 pp. 165-171, Gao, 2011 pp. 17-29, Yi-jun et al., 2011 pp. 6-7). Tong (2015 pp. 83-107) puts an emphasis on environmental discourses in China using newspapers as a data source and considers climate change one type of environmental problem. As Tong's research does not focus on climate change discourses, it requires further research.

There was not a specific study on Chinese climate change discourse until the emergence of study of climate change politics of China made by Ellermann (2013).



His research discusses how climate change discourses influence Chinese institutions of mitigation (Ellermann, 2013 p. 5). This makes a contribution to the discussion on climate change discourses and politics of China. However, it remains weak in terms of studying dynamic climate discourse and discourse networks and their social construction. His research considers the media to be an actor in making discourses rather than a public sphere and ignores the participation of NGOs and other international institutions in debating climate change issues in China.

When talking about the public discursive space of climate change, Eberhardt (2015 p. 49) discusses a wide range of governmental and non-governmental actors such as Greenpeace. However, it considers climate change discourse as a set of static situations rather than dynamic processes of constructing the issues.

Therefore, based on this critical literature review, it is very important to borrow the key elements of the approach developed by Hajer (1995) to a study that seeks to understand the development of constructed climate change discourse and discourse networks represented in the newspapers in China. Firstly, it is very useful to focus on how different actors are cited in the coverage. Secondly, it provides a platform for observing the dynamic process of constructed climate change discourses of the newspapers. Thirdly, it helps explain how various non-state actors, particularly those who are not involved in China's policy-making system, have been cited in the climate coverage by the newspapers.

### **3.7 Discourse network approach**

This section discusses the rationale for borrowing the key elements of the Hajer's framework to strengthen the discourse network approach. Furthermore, as the wide range of existing literature have been conducted in the Western context, it is very important to discuss the theoretical travelling of the discourse networks approach to the case of China.

Social problems do not exist in an objective and static arrangement but they are widely defined (Blumer, 1971 pp. 298-302, Spector and Kitsuse, 1973 p. 146, Hannigan, 2006 pp. 63-64). As Hajer and Versteeg (2005 p. 178) discuss, discourse analysis has widely been used for the relationships between power and knowledge behind environmental issues. Scientists, policy-makers and other social stakeholders

are engaged in socially constructing climate change issues (Hajer and Wytse, 2013 p. 83). Discourse networks contain a set of storylines linked to actors making discourses to be powerful and dominant (Howarth and Torfing, 2005 p. 303). Therefore, it is very important to observe how the various actors have been cited in the climate change discourse of the newspapers in China.

### **3.7.1 Key elements of discourse coalitions approach**

Hajer's contribution to the study of environmental discourse reflects an understanding of two theoretical approaches to discourse. Hajer (1995 p. 46) critically discusses the interaction of discourses and the importance of storylines. Also, it does not see discourse as a medium which can be manipulated by individuals, but considers discourse as part of reality (Hajer, 1995 p. 51). It looks at how discourses interact with each other, evolve and become dominant. The discourse-coalitions approach raises the importance of discursive interaction being linked to various actors and has seen environmental politics as an argumentative struggle for making sense of issues (Hajer, 1995 p. 53). Also, this approach focuses on discursive change and permanence (Hajer, 1995 p. 53).

The approach points to a dual structure: 'social action originates in human agency of clever, creative human beings but in a context of social structures of various sorts that both enable and constrain their agency' (Hajer, 1995 p. 58). Also, discourse plays an important role in changing politics through creating new meanings and identities (Fischer, 2003 pp. 100-104). Further, the discursive struggle including its dominance or hegemony can be identified in institutional practices. In this sense, institutional arrangements have a close link with the emergence of discourse (Hajer, 1995 p. 59). Besides connections between discourse and reality, the concept of storylines plays a key role in forming knowledge, positioning actors and creating groups among various actors (Bulkeley, 2000 p. 735).

Storylines are narratives reflecting social reality among different dominant opinions, and they can allow claim-makers to integrate fragmented discourses and have a completion of discourse (Hajer, 1995 p. 63). Claim-makers can be understood as the various actors who are making sense of issues via discourse. Firstly, storylines can reduce the complexity of environmental problems (Hajer, 1995 p. 63). Thus, they help shape the recognition of environmental problems. By using a key element of

environmental issues such as a metaphor, storylines can be used to understand complex environmental problems in a holistic and simple way. Secondly, with a wider acceptance by claim-makers, storylines become stable and ritual, and they are used as usual (Hajer, 1995 p. 63, Fischer, 2003 p. 105). Thirdly, a wide range of claim-makers are allowed to introduce their understandings and opinions to the development of storylines (Szarka, 2004 p. 318). This may bring changes to the process of shaping storylines. Putting it simply, storylines can reflect complexity, permanent debate, and changes. Therefore, storylines are a basis for shaping discourse coalitions by gathering understandings and identifying the positions of those claim-makers.

Discourse coalitions approach contains three key elements including a series of storylines, the actors of making storylines, and practices based for discursive activity (Hajer, 1995 p. 65). Storylines are shared by discourse coalitions, and also have an influence over actors' knowledge changing practical political reality (Metze and Dodge, 2016 p. 3). Discourse can be understood as the means of understanding, representing and functioning interests (Toke, 2013 pp. 557-558). When a collective meaning is given to different practices, the discourse coalitions emerge.

Borrowing key elements from the discourse coalitions approach helps us to understand constructed climate change discourses for several reasons. Firstly, climate change is, like other environmental issues, a complex scientific issue and is considered, to some extent, to be scientifically uncertain. More importantly, climate change issues are involved in not only scientific debates but also other dimensions such as economic development, energy and emissions, public involvement, environmental concerns and climate justice. The approach could therefore provide a broader space for understanding climate change issues constructed in newspapers. Secondly, the climate change coverage becomes a platform not only for citing scientists and governmental officials but also for citing NGO groups and even businesses. Because of its focus on actors, the approach can be useful in linking differed opinions and ideas to various social actors from scientists, policy-makers, governmental advisors, environmental activists, business people, and journalists and so on. Thirdly, in terms of climate change issues, these different social actors could be cited and linked to a common discourse. Therefore, the key elements of discourse-coalitions approach are borrowed by my current PhD research.

### 3.7.2 Discourse network approach to studying discourses of newspapers

This PhD thesis borrows key elements of discourse coalitions approach as analytical framework to understand the constructed discursive reality in newspapers rather than politics in the real world. While discourse coalitions approach can reflect a political reality effectively, my PhD research explores how the newspapers discursively construct the 'reality'. As Table 3.2 shows, there are distinctions among discourse coalitions approach, discourse network analysis and media studies. In this thesis, I do not expect to reveal the discourse coalitions through analysing the discourses of newspapers. Rather, my PhD research explores how the newspapers cite various actors as news sources, link them to various statements and discourses and construct discourse networks identified in coverage. I call these 'constructed discourse networks' which are constructed and exist only in newspapers, not in the broader socio-political context. Also, due to the political and media system of China, identifying discourse coalitions through newspapers is not reliable. But, exploring the constructed discourse networks in the newspaper can make a contribution to existing literature on climate change newspaper coverage of China. Therefore, my PhD research employs the discourse network approach as a fundamental analytical framework and borrows the key elements namely storylines, various actors, dominant discourses and networks from the discourse coalitions approach.

**Table 3.2 Distinctions among discourse coalitions, discourse networks and media studies**

<b>Discourse coalitions approach</b>	<b>Discourse network analysis</b>	<b>Media studies</b>
Storylines	Statements/Concepts	Quotation
Claim-makers	Actors	News sources

There is a wide range of existing literature on combining discourse network approach and newspapers studies. Wagner and Payne (2017 p. 15) map climate change discourse and actors in Irish newspapers, Kukkonen et al. (2017) investigate networks using three newspapers of the US as whole data source, Hovardas (2017 p. 5) focuses on discourse groups in Greek newspapers, Metze and Dodge (2016) use newspapers as primary data for understanding hydro-fracking discourse networks in Europe and the US, Lauderdale (2014) looks at discourses networks around the LGBT issue in the US newspapers, Takahashi and Meisner (2012 p. 350) study environmental discourse groups in Peru through newspapers, Leifeld and

Haunss (2012 p. 382) made a significant contribution to the development of discourse network analysis combining discourse coalitions approach and newspapers, and Ashlin and Ladle (2007 p. 331) look at natural disasters and environmental discourse networks with the UK newspapers.

Particularly, there is large research project called Comparing Climate Change Policy Networks (COMPON). This project involves 19 countries with many of the country research teams involved in mapping actors cited in making discourse identified in newspapers (Broadbent et al. 2016). Horta et al. (2017) use newspapers to study how political actors construct climate change issues in Portugal. Stoddart and Tindall (2015) use newspapers to explain climate change politics and governance in Canada.

In summary, the discourse network approach has been widely used in studies, beyond political reality, using newspapers as the data source. Therefore, I use the term 'constructed discourse network' to analyse how three newspapers construct discourse and discourse network identified in the climate coverage.

### **3.7.3 Theoretical travelling of the discourse network approach**

The notion of travelling problems was initiated and discussed by Sartori (1970 pp. 1034-1036) in terms of comparative politics. Sartori (1970 pp. 1034-1036) expressed two concerns about theoretical applications in comparative politics. One concern is that political research has been conducted globally, which is no longer limited to Western countries. Another concern is how Western researchers apply their academic experiences rooted in Western countries to studies on other regions.

Sabatier et al. (2005 pp. 11-19) discuss theoretical travel among democratic governments by studying collaborative approaches to watershed management. Benson et al. (2013 p. 735, p. 749) also highlight the significance of considering the theoretical travelling problems in studying collaborative watershed partnerships travelled from the US to the UK. Therefore, theoretical applications across national borders should be discussed and explained carefully. Theoretical travel should not be taken for granted.

This section explains the importance of theoretical travelling of the discourse network approach. Firstly, existing studies improve the understanding of environmental and

climate change discourse and politics in the Western countries (Bulkeley, 2000, Bulkeley, 2014, Hajer, 1995). However, different countries have different understandings of climate-related issues such as energy security (Toke and Vezirgiannidou, 2013 p .548). This requires a specific study on the case of China which is substantively different from Western countries. Secondly, until 2006, addressing climate change started to attract a wide attention and debate in China (Tolan, 2007 pp. 4-8). There is a wide range of studies on policy-making of climate change in China and its drivers (Yu, 2004, Bjørkum, 2005, Heggelund, 2006, Lewis, 2007, Zhang and Zheng, 2008, Hallding et al., 2009, Harris, 2010, Schreurs, 2011) (see Chapter 1). Although there are many studies on the various actors in the climate change politics of China, they have not attempted to map the network linking actors and discourses until Ellermann (2013 pp. 56-126). His work marks the substantial and important beginning of linking climate change with discourse networks in China. But my research explores a much wider range of social actors cited in the newspapers and observes the dynamic processes of the constructed climate change discourse network.

#### **3.7.4 Discursive structuration and institutionalisation constructed in the newspapers**

On the basis of qualitative and interpretive research, this section demonstrates *discursive structuration* and *discursive institutionalisation* constructed in the coverage. As discussed in the section on theoretical travelling, constructed discursive structuration and institutionalisation need to be considered in the context of China. In general, my thesis looks at how the constructed climate change discourse has been structured being linked to a wide range of actors cited in the coverage. It also identifies the dominant constructed discourses and discourse networks represented in newspapers in China. This section defines and discusses the concepts of discursive structuration and discursive institutionalisation constructed within the newspapers.

*Discursive structuration*, which is also called discourse structuration, refers to interactions between different social and governmental actors shaping and producing discourses via knowledge (Wittrock et al., 1991 pp. 76-78, Radaelli, 1995 pp. 167-168). When a discourse tends to dominate the process of conceptualising policy ideas and options, discursive structuration can be identified and recognised (Hajer,

1993 p. 46, Hajer and Laws, 2006). It is in this sense that my work needs to understand how a discourse is constructed to dominate the discussions on climate change revealed in the coverage in China. Also, it is necessary to observe how various actors are represented in producing, reproducing and adopting ideas, concepts and statements in climate coverage. This is because constructed discursive structuration can be understood as a process of newspapers constructing links between various actors and discourses.

Before a discussion on *discursive institutionalisation* constructed by the newspapers, it is very important to explain its fundamental differences to the term 'discursive institutionalism'. Firstly, they generally have different theoretical roots. Discursive institutionalism remains in the field of institutionalism with its focus on the continuity of political discursive development (Muller, 2015 p. 379) and it is thus identified as a fourth 'new institutionalism' (Schmidt, 2008 p. 304). It simply employs the role of discourse to strengthen the understanding of institutionalism. However, *discursive institutionalisation* does not merely concentrate on the establishments of policy and institutional arrangements. Rather, it refers to an explanation of how the structuration of discourse can be transformed into governmental voices and policy rhetoric (Hajer, 1995 p. 61). Therefore, discursive institutionalisation has deep roots in the theory of social constructionism. Secondly, because of its theoretical roots, discursive institutionalism serves causal relationships between discourse and institutional arrangements (Schmidt and Radaelli, 2004 p. 200). However, discursive institutionalisation looks at how the constructed discourse has been linked to governmental actors cited in the coverage.

In terms of *discursive institutionalisation*, my work explores how various storylines and ideas have been constructed by newspapers to be linked to key governmental actors such as the National Development and Reform Commission (NDRC), the Ministry of Foreign Affairs (MoFA) and even the State Council cited in the climate change discourses. This is mainly because the constructed discourse in newspapers cannot directly and decisively influence policy rhetoric particularly in China. Therefore, it is very important to observe the discursive change of the governmental actors cited in the newspapers. Also, due to the political and media system of China, this PhD research discusses the extent to which policy rhetoric can be constructed in

terms of its relationship with the development of climate change discourses of the newspapers.

### **3.8 Constructed climate change discourse networks in newspapers in China**

This PhD thesis has its roots in a social ontological and social epistemological position. From the perspective of social ontology, climate change issues should be considered an outcome of social construction. This is not to say that Chinese newspapers fundamentally challenge the reality of climate change. Rather, the newspapers can construct climate change discourses and discourse networks in their coverage. From the perspective of social epistemology, the way of interpreting climate change matters in the present research. Qualitative methods are used to understand the constructed climate change discourses of China. The main characteristic of this PhD research is analysing discursive interaction particularly between the constructed discourses and discourse networks identified in coverage.

This research uses *People's Daily*, *China Daily*, and *Southern Weekend* as data sources (see Chapter 2). The selection of newspapers is determined by the nature of the Chinese media system. On the one hand, the Chinese Communist Party maintains a significant role in controlling the Chinese media (Zhao, 2004) because of its feature as state-owned media. On the other hand, the Chinese media system is also transforming from being state-owned to marketised (Zhao, 2000 p. 5). This transition might enhance the scope of Chinese news reporting and might augment its extent of environmental coverage. As Yang (2005) suggests, the Chinese media shows its autonomy when reporting news relating to environmental issues, criticising local governments and sharing similar opinions with environmental NGOs. It is in this sense that the constructed climate change discourse on media coverage in China can show various concerns and ideas.

Therefore, this PhD research is conducted around the main research question: how have climate change issues been discursively constructed and various actors been cited in newspapers in China at critical points over time? The methodological consideration points to an interpretivist approach to discourse network analysis. The constructed climate change discourses linked to the wide range of actors is considered the process of discursive structuration constructed in the coverage. The



evolving constructed climate discourses linked to the core governmental actors in the coverage are considered the process of discursive institutionalisation constructed in the newspapers.

### **3.9 Summary**

This chapter provides a social constructionist perspective of understanding climate change issues constructed in the newspapers. Discussions on the theory of social constructionism reveal the debate over the nature of social reality between social constructionism and critical realism. My PhD thesis argues that the social reality and world is socially constructed. Also, this chapter states that the epistemology should be social rather than objective and be consistent with the social ontological assumption. Given that the social world is socially and discursively interpreted and constructed, this chapter has discussed the role of discourse in the social construction of climate change issues identified in the newspapers. Discourse should be used for understanding the world through interpretivist and qualitative research.

The definition of environmental discourse is discussed through critically appraising different approaches to it. Environmental discourses can evolve dynamically. Also, this chapter illustrates why this thesis employs the discourse network approach borrowing the key elements from the idea of discourse coalitions namely storylines, actors and dominant discourses and networks constructed in the climate coverage.

Ultimately, studies on environmental and climate change discourses could reveal the extent to which the Chinese climate policy rhetoric is related to constructed climate change discourses and vice versa. More importantly, it would find how social actors have been cited in the Chinese printed media and therefore how they are linked to certain politically acceptable discourses.

The next chapter will discuss methodology, particularly with a focus on Discourse Network Analysis in order to map the relationships between storylines and claim-makers in the three newspapers that I analyse (*People's Daily*, *China Daily* and *Southern Weekend*).

## Chapter 4: Methodology

Based on Chapter 3, this chapter introduces my research design and explains the methodology employed and developed in this PhD thesis. Section 4.1 explains the nature of a comparative longitudinal study. Section 4.2 critically reviews the multiple ways of data collection and explains the advantages of conducting discourse network analysis on newspapers. Section 4.3 explains the criteria of selecting and identifying news articles from the newspapers. Section 4.4 introduces an interpretivist approach to discourse network analysis.

### 4.1 Research design: comparative longitudinal study

This section explores the research methods applied to the analysis of Chinese climate change discourses. It also explains and discusses why the research employs a comparative longitudinal design.

I provide the rationale for conducting a comparative longitudinal study and explain why other types of research design are not suitable for this PhD thesis. Fundamentally, there are mainly three types of research design, namely experimental, cross-sectional and longitudinal, and comparative designs (Halperin and Heath, 2012 p. 167). Experimental designs mean that a researcher is capable of having control over experimental environment. Given the controlled experimental designs, the research can test whether two variables are relevant in a causal relation (Halperin and Heath, 2012 p. 167). However, based on ontological and epistemological considerations discussed in Chapter 3, this PhD research does not look at causal mechanisms.

Cross-sectional designs refer to a form of analysis specific to data collected from different sectional levels at a single point. The cross-sectional design can be, for example, used to analyse central, provincial and local governmental responses to climate change policy-making at a critical point. In this thesis, the research design does not use the cross-sectional design.

Longitudinal designs, differently from cross-sectional designs, focus on observing changes and tendencies over time by analysing data samples at several intervals (Halperin and Heath, 2012 p. 169). The longitudinal design matches the purpose and

requirements of studying dynamic Chinese climate change discourse in the newspapers.

This research has a focal point at observing how climate discourses and discourse networks have been constructed dynamically in newspapers in China over time around three critical points in 2007, 2009 and 2015. Briefly, the critical points reflect three milestones in terms of Chinese climate change politics (see Chapter 1). Because the longitudinal design is effective for analysing the same data sample over time, this thesis employs comparative designs for comparing changes in constructed discourses and constructed discourse networks at different critical points. Also, it looks at how different newspapers have constructed the climate discourses and represented various actors and discourse networks in the coverage. Therefore, the research design for this PhD can be called the comparative longitudinal study.

## **4.2 Data Collection**

This PhD research identifies the newspapers for discourse analysis as the main source of data collection. Also, it identifies and selects three policies and the documents from key actors in order to compare their statements with the discourses of the newspapers. In this sense, this section states the weaknesses of other types of data collection and explains why I deploy the discourse analysis of these textual sources.

There are several ways of gathering or collecting data, including questionnaires and surveys, focus groups, interviewing, and discourse or content analysis (Halperin and Heath, 2012 pp. 175-177). Questionnaires and surveys have the advantages of gaining information of personal experiences and opinions in a structured format. However, if this research focuses on the study of public opinions of climate change issues, questionnaires and surveys should be feasible. In contrast to questionnaires and surveys, focus groups can be designed to collect data in an unstructured form. The advantage of focus groups is generating data or outcomes such as emotional responses (Halperin and Heath, 2012 p. 175). However, focus groups are inadequate to collect data for understanding how the constructed Chinese climate change discourses have evolved within newspapers over time.

Interviewing can make a limited contribution to the study on climate change discourse of newspapers. Interviews can be, to a certain degree, important for collecting data and obtaining information in terms of studying the policy-making of climate change. Elite interviewing, in particular, is widely employed in existing studies on Chinese climate change politics (Gippner, 2016 p. 53, Torney, 2015 p. 107, Stensdal, 2012 p. 1, Heggelund, 2007, Bjørkum, 2005 p. 4). However, there are three weaknesses of conducting this method. Firstly, the reliability of data collection cannot be entirely controlled. Given the nature of the Chinese political system, officials could be constrained in telling their version of the truth. The extent to which interviewees tell the truth varies largely (Heimer and Thøgersen, 2006). Secondly, elite interviewing has a sampling bias because it has a limited reflection of the whole constructed Chinese climate change discourse. It is not easy to find all the actors involved in the constructed Chinese climate change discourse. For example, existing studies fail to explain how environmental NGOs are cited in newspapers in China. Thirdly, gaining access is a significant problem in China. Fieldwork including interviewing in China is a challenge and a tough task (Heimer and Thøgersen, 2006).

Therefore, based on the critical review of these weaknesses, the discourse analysis of newspapers meets the requirements of research on Chinese climate change discourse. Firstly, the discourse analysis of newspapers relies on the objective texts. The texts derived from newspapers can provide a discursive space for understanding the social construction of climate change. Secondly, the discourse analysis of newspapers can identify a wide range of social actors cited in the coverage and map the constructed discourse networks with various storylines. Thirdly, it provides a platform of observing dynamic constructed climate change discourses over time. Fourthly, content analysis concentrates on texts only and ignores context (Halperin and Heath, 2012 p. 177). In this sense, discourse analysis, rather than content analysis, is employed in this research design because the study on the constructed climate change discourse requires an integrated consideration of texts and context. My thesis therefore selects newspapers as main data sources and identifies *People's Daily*, *China Daily* and *Southern Weekend* for observing dynamic constructed climate change discourses of China (see Chapter 2).

Also, the key governmental policies of China are selected for identifying the official positions and voices on climate change issues (see Chapter 1). They are used to

compare the constructed climate change discourse of the newspapers with climate policy rhetoric. This research identifies key actors and collects their climate-related documents for revealing how the newspapers construct their discursive changes in the coverage.

### **4.3 Searching, selecting and identifying news articles from the newspapers and key climate-related documents**

This section explains why the research selects news articles within the six months before and after the critical points and identifies ‘climate change’ and ‘气候变化’ as key words and Chinese characters. My PhD study collects and analyses every single article identified rather than conducting sampling. Therefore, I had spent at least 10 months full-time conducting the data collection and coding. Because of limited access to the newspapers, I had read all of climate-related coverage, and copied and pasted the identified news articles into my data base.

#### **4.3.1 Searching news articles**

This PhD study searches climate-related news articles by identifying key words in the full text rather than simply titles in the coverage. Collecting data from newspapers of China is different to the similar research method conducted in other countries. Unfortunately, there is not an effective tool for downloading articles of the newspapers like LexisNexis. The CNKI (China National Knowledge Infrastructure) is a common database for searching academic books, journals, articles and newspapers in China. However, there are two limitations of using it as a main way of collecting data. First, being a researcher registered outside China, I can only search for the titles of news articles but I do not have access to the full text of them in the CNKI. Second, the CNKI provides a narrow range of the newspapers of China including *People’s Daily* and *Southern Weekend*. In this sense, *China Daily* could not be found in this database. Also, it has no longer provided the service for *Southern Weekend* since 2013. Therefore, I use various ways of collecting data.

In terms of *People’s Daily*, I identified and collected the related news articles from the official database of the newspaper. This online database provides the whole range of news products of *People’s Daily* (please visit: [search.people.com.cn](http://search.people.com.cn)). The database can show the news articles filtered by my selection. However, I do not have full access to the whole range of the news products. Some news articles

cannot be clicked and opened due to online technical issues. Therefore, I input the title of the articles into Google or Baidu (a popular Chinese search engine) and collected them.

In terms of *China Daily*, its way of data collection is similar to that from *People's Daily*. However, its main difference to *People's Daily* is that *China Daily* has other editions such as *China Daily Europe* circulated in the European countries. As my PhD research focuses on the climate change discourse in the coverage of China, I selected the option '*China Daily*' filtering others. This database can be found by visiting <http://searchen.chinadaily.com.cn/>.

In terms of *Southern Weekend*, I have to use CNKI and the online database of *Southern Weekend*. I use CNKI to identify and select the climate-related news articles from the year 2007 and 2009. This database is called China Core Newspapers Full-text Database (Zhongguo Zhongyao Baozhi Quanwen Shujuku) and it can be found by visiting <http://gb.oversea.cnki.net/kns55/>. After this selection, I collected them from the official online database of *Southern Weekend*. Due to the lack of information service for this newspaper since 2013, I used the online database of the paper to filter the news articles during the period of the year 2015.

#### **4.3.2 Identifying news articles**

While comments and reviews can be used for content analysis, they are not suitable to the discourse network analysis employed by my PhD research. Discourse network analysis is designed to explore the relationship between actors (claim-makers) and concepts (storylines). Comments and reviews are not coverage but they express individual or organisational views and ideas. Those comments may contain a significant amount of information including many different storylines. Using comments as data texts may cause that the contents of coverage are submerged in the many storylines of several comments or reviews. Therefore, in order to reduce the level of bias, the present research excludes comments and reviews from data sources.

Also, there are three reasons why this study filters news articles through identifying key words 'climate change' in *China Daily* and '气候变化' which means climate change in Chinese in *People's Daily* and *Southern Weekend*.

Firstly, my thesis focuses mainly on climate change discourses since 2007. As Freeman (2017 p. 6) reveals, Asian newspapers have preferred 'climate change' to 'global warming' used in the coverage particularly after 2007. Also, the words and characters 'climate change' in Chinese and English have basically been used in Chinese governmental documents. It is useful to discover how governmental actors make sense of the relevant issues.

Secondly, in the early stage of process of coding data from newspapers, it is evident that 'climate change' and 'global warming' overlapped each other dramatically in the newspapers. In this sense, Christensen and Wormbs (2017 p. 6) use the two terms 'climate' and 'climate change' to analyse Swedish climate coverage. Particularly, in my work, many articles with key words 'global warming' usually contain 'climate change'. However, those articles with 'climate change' do not necessarily contain 'global warming'.

Thirdly, using 'climate change' as the key words can reduce data bias. In China, Li and Zhang (2017) use '气候变化 (namely climate change)' to search news articles for discourse analysis of the Chinese coverage of Climategate. In Chinese discourse, the words and characters 'global warming' are, to a great extent, linked to scientific research and reality. Using 'global warming' could lead to a conclusion that a large number of scientists and academic actors raise the importance of climate research beyond other storylines in China. Therefore, 'climate change' is a solid choice of key words for searching relevant articles.

#### **4.3.3 Selecting news articles within the six months before and after policy moments**

This PhD thesis identifies news articles within the six months before and after critical points. In total, it focuses on a three-year study on dynamic constructed climate change discourse in newspapers in China. Therefore, the periods of selecting news articles are from 4<sup>th</sup> December, 2006 to 3<sup>rd</sup> December, 2007, from 26<sup>th</sup> May, 2009 to 25<sup>th</sup> May, 2010 and from 1<sup>st</sup> January to 30<sup>th</sup> December, 2015. This section provides rationale for identifying the periods.

Compared to a long-term study on climate change coverage, the selection of news articles within the six months around policy moments can strengthen the observation

of dynamic climate change discourses. Previous long-term studies on climate change coverage include the US case study from 1988 to 2004 (Boykoff and Boykoff, 2007 p. 2), the UK climate change discourse from 2000 to 2006 (Boykoff, 2008 p. 554), climate coverage on the US and Swedish press from 1<sup>st</sup> December, 1997 to 31<sup>st</sup> December, 2007 (Shehata and Hopmann, 2012 p. 182) and US climate coverage from 1985 to 1995 (Trumbo, 1996). The main advantage of these studies is the long-term focus on the evolution of climate change coverage and the constructed discourse. However, these studies could undermine the importance of observing the links between policy rhetoric and the constructed climate discourse. They did not compare discourses before and after policy moments.

Short-term studies involve observations on US and UK media coverage within two weeks after the releases of each Working Group report of IPCC between 2013 and 2014 (O'Neill et al., 2015 p. 383), environmental journalism in Bangladesh between 1<sup>st</sup> and 15<sup>th</sup> June, 2009 (Das, 2012 p. 230) and coal and climate change coverage in Australia in July, 2009 (Bacon and Nash, 2012 p. 248). These studies focus on specific and significant events triggering the climate change coverage. Apparently, they did not show how climate change discourses had evolved beyond the specific events. Particularly, as explained in Chapter 3, this study does not focus on how an event triggered and caused the emergence of climate change coverage, but it is interested in qualitative similarities and differences between policy rhetoric and newspapers coverage in the medium term.

One study looks at the Argentinean climate discourse and coverage within one year from 1<sup>st</sup> October, 2009 to 30<sup>th</sup> September, 2010 (Mercado, 2012 p. 197). It mainly focuses on how the media frames climate change before, during and after the Copenhagen summit. Other studies with similar approach of the period selection include studies on the US and UK climate coverage between 2003 and 2006 (Boykoff, 2007 p. 470) and on the framing of scepticism of climate change in the US newspapers between September, 2007 and September, 2009 (Hoffman, 2011 pp. 9-10). The main advantage of these studies is observing how dynamic climate framing and discourses of the newspapers have evolved across, rather than been triggered by, significant events. In this sense, selecting the six months before and after key policy moments (2007, 2009, 2015) meets the requirements of the research purpose.



#### 4.3.4 Identifying storylines in textual and contextual considerations

Coding data involves the five dimensions of climate change discourses identified in Chapters 3 and 5 namely economy, energy and emissions, science and ecology, public involvement, and responsibility. This coding process identifies the storylines according to the textual meanings. A storyline refers to a statement, idea or concept identified in the quotation cited in newspapers. Some obvious storylines have been discussed and derived in Chapter 1, such as economic priority and economic opportunity. However, other types of storylines had developed in the process of coding data. For example, initially, the storyline 'adaptation' includes a wide range of statements concerning adapting to climate change issues. However, the statement on resilience to climate change shows a clear difference to 'adaptation' in the climate discourse in China. The statement on resilience focuses on specific solutions via raising infrastructure, while 'adaptation' merely relates to an emphasis on the importance of adaptation. In this sense, 'resilience' is identified as a storyline. Therefore, the final list of statements shows 32 types of storylines identified in the coverage. Chapter 5 will discuss and compare the differences between storylines.

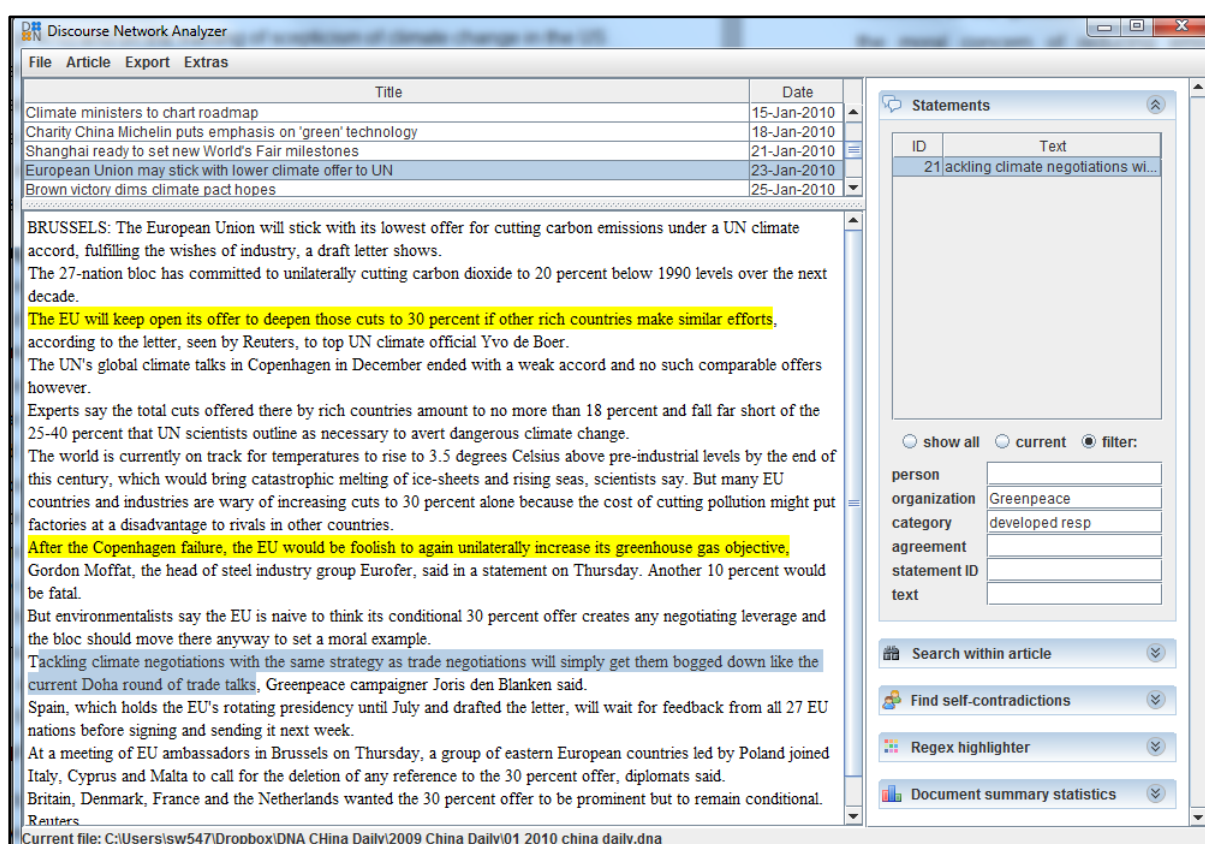


Figure 4.1 identifying and coding storylines and actors in the climate coverage

It is important to consider and identify the context beyond the selected texts. As Figure 4.1 shows, the coding is derived carefully through consideration of the context of the article. A statement is identified through highlighting the sentence and identifying the news source as a claim-maker cited in the coverage. For example, there is a claim made by Greenpeace in *China Daily* on 23<sup>rd</sup> January, 2010. Focusing on the text of the sentence, it is not clear to summarise the claim (see Figure 4.1). As the quotation below shows, it sounds like either an economic concern or international cooperation.

"Tackling climate negotiations with the same strategy as trade negotiations will simply get them bogged down like the current Doha round of trade talks" (see 'European Union may stick with lower climate offer to UN', *China Daily*, 23/01/2010)

However, as the quotation below shows, it is very obvious that the claim focuses on the moral concern of reducing emissions. The EU should take the moral responsibility for addressing climate change. According to the categorisation of discourse in this PhD research, the claim should be coded as 'developed countries responsibilities'.

'But environmentalists say the EU is naive to think its conditional 30 percent offer creates any negotiating leverage and the bloc should move there anyway to set a moral example.' (See 'European Union may stick with lower climate offer to UN', *China Daily*, 23/01/2010)

As Figure 4.1 shows, focusing on quotes is not sufficient to analyse discourse without a contextual consideration. Therefore, it is very important to code and identify claims through understanding text and considering contexts in the articles.

#### **4.3.5 Identifying the actors cited in the coverage**

My PhD research identifies news sources cited in the coverage as the actors revealed in the discourse networks (see Chapter 2).

"We use energy in our daily lives all the time, often without thinking about it. We hope one can better understand how changes in one's life can affect energy consumption and the environment by using this BP energy calculator," Chen Liming, president of BP China, told *China Daily* in an exclusive interview.' (see 'BP looks to a cleaner, greener energy future', *China Daily*, 08/03/2010)

The example above shows how an actor can be identified in this research. Chen was a manager of BP China being cited in the climate-related coverage calling for behaviour change. This demonstrates that *China Daily* cited BP as a news source in

its coverage. Therefore, BP was identified as an actor cited in the climate change discourse of the coverage.

It is worth noting that the countries or stakeholders mentioned and discussed in the coverage are not identified as discourse network actors unless they are cited as news sources. The below example shows the difference between discourse network actor identified and countries/stakeholders mentioned in a statement. This statement was used to criticise the US for its weak target of reducing emissions. Also, some industrialised countries were mentioned in the statement. However, these countries were not identified as discursive actors represented in the coverage as they were not cited as news sources in this statement. The China Institute of International Studies (CIIS) was cited as a news source making this statement in the coverage. Therefore, CIIS was identified as an actor in the climate discourse of the coverage. This statement was categorised into the storyline 'US resp(onsibility)' as it focuses on the responsibilities of the US in addressing climate change.

"The emissions reduction target offered by the US is still far below the expectations of developing countries," said Liu Qing, a researcher from the China Institute of International Studies. "It is also well below the targets proposed by the European Union and Japan." (see 'China targets massive 45% carbon cut', *China Daily*, 27/11/2009)

Therefore, my PhD research not only can map the links between actors and climate discourses/storylines represented in coverage but also it can reveal how the newspapers cited various actors as news sources.

#### **4.3.6 Labelling discourses and linking storylines to discourse networks**

As discussed in Chapter 3, discourse contains a set of storylines. In this sense, different discourses consist of different storylines. There are three discourses identified namely development, ecological modernisation and low carbon in the context of China's climate change governance.

Isaksen and Stokke (2014 p. 113) uses the Third World discourse to label the Indian concepts of prioritising development and emphasising the principle of common but differentiated responsibilities in terms of addressing climate change. Under this discourse, developing countries have priority to economic development while developed countries should undertake historical responsibilities for reducing emissions. As discussed in Chapter 1, China shares a similar position on

international climate change governance with India. In the context of China, the term 'development' does not only mean economic growth but also it refers to a political, social and cultural ideology. During the era of President Hu (2002-2012), the concept of scientific development was a fundamental political concept on China's political agenda (Peopledaily, 2007). Therefore, I label the concepts which do not enhance action on reducing substantial emissions as the development discourse. As shown in Chapter 1, economic development and poverty eradication is seen as a national priority in terms of addressing climate change (storyline 'development'). In order to secure long-term economic development, China makes an effort to control energy consumption and improve the energy mix (Marks, 2010 p. 97) (storylines 'energy consumption', 'energy mix', 'carbon sink', 'no cap' and 'no target'). Ecological, scientific and environmental concerns are linked to a concern about economic development rather than a call for substantial domestic action on reducing emissions (storylines 'adaptation', 'ecology', 'research', 'scientific certainty' and 'uncertainty'). China emphasised that it was the victim of climate change and a developing country without obligations of substantial emission reduction (Yu and Zhu, 2015 p. 64) (storylines 'developed resp', 'different resp', 'diplomacy' and 'US resp'). Chapter 5 provides detailed explanations of the categorisation of the storylines.

Also, Isaksen and Stokke (2014) use Win-Win discourse to show convergence between recognising ecological protection and continuing economic growth. It is seen as discourse which shows a more proactive attitude towards addressing climate change than the Third World discourse. However, the Win-Win discourse is too narrow to show the complexity of climate change issues. The more proactive concepts not only include a balance between environmental protection and economic growth but also they involve other elements including transforming economic structure, implementing policy tools, utilising technologies, changing lifestyle and recognising the urgency of climate change effects. These elements reflect the core feature of the Ecological Modernisation (EM) concept. My research recognises other plausible interpretations of EM discourse. It does not necessarily coincide with other interpretations. However, my work labels the EM discourse based on the existing literature and the context of China. Toke (2017) reveals four main elements of the EM concept applied to China namely modest economic growth, technologies, environmental governance and economics of governance. In this

sense, my PhD thesis defines the EM discourse based on existing literature. Firstly, the modest and modern economic growth requires economic and industrial transformation (Jänicke, 2008 p. 558, Toke, 2017). Particularly, in the context of China, industrial transformation and environmental governance is designed to adjust to the modest economic growth (Toke, 2017). Secondly, utilising technologies is seen as a core element of the EM concept (Mol, 2006 pp. 32-33, Christoff, 2006). Thirdly, environmental governance involves effective policy-making and changing behaviour (Moore, 2014 p. 948, Carter and Mol, 2006 p. 33, Langhelle, 2000 pp. 305-306, Toke, 2017). The notion emphasises on the means of improving the existing systems such as adjusting policies and changing public behaviour in order to fix environmental problems. Also, the notion incorporates the ideas of threat, survival and crisis into environmental thoughts. Fourthly, the economics of governance involves policy instruments such as encouraging technological competition (Toke, 2017) and pricing natural resources (Mol and Carter, 2006 p. 158). In this sense, the EM discourse in this work refers to the utilisation of technology (storyline 'tech'), economic transformation and industrial upgrade (storyline 'transformation'), the implementation of economic policies and tools and changes in public behaviour and lifestyle (storylines 'economic tools', 'carbon intensity', 'behaviour' and 'surviving').

Therefore, I label the concepts discussed above as the Ecological Modernisation discourse. It is worth noting that the Chinese interpretation of Ecological Modernisation does not focus on the value of civil society and wide participation of NGOs (Zhang et al., 2007 p. 665). This is because of the Chinese authoritarian political system. Thus, in my research, the concept of the wide participation of stakeholders is considered under the low carbon discourse which shows a proactive attitude towards addressing climate change in the context of China.

Since 2009 and particularly 2010, the term 'low carbon' has become increasingly popular in the discussions on climate change in China (Ellermann, 2013 p. 78). Low carbon economy is seen as an opportunity, and low carbon energy system is designed to control coal consumption. China is seen as a key emitter and it should be responsible for taking substantial action on reducing emissions. In this sense, addressing climate change is discursively constructed as an opportunity and responsibility in a positive way. On the basis of the discourses of development and ecological modernisation, the notion of low carbon refers to economic opportunity

(storyline 'economic opportunity'), low carbon energy system (storylines 'low carbon energy', 'market' and 'transparency'), resilience (storylines 'resilience' and 'local') and the responsibility of major economies and emitters (storylines 'China resp', 'developing resp' and 'major emitters'). Therefore, I label the proactive attitudes as the low carbon discourse.

My research maps the constructed discourse networks on the basis of links between storylines and actors constructed in the climate coverage. Actors can be linked to various storylines even across different discourses constructed in the coverage. This can be used to demonstrate and reveal the complicated constructed climate change discourses. Dominant discourses must be linked to a wide range of various actors and particularly governmental bodies cited in the coverage. In this sense, I can identify dominant constructed discourse networks in the climate coverage.

#### **4.3.7 Identifying key actors and main climate-related documents**

This PhD research identifies the three key climate policy documents. Analysing policy documents is used to understand the discursive links to and impact over the climate change coverage. As revealed in Chapter 1, these documents are *China's National Climate Change Programme* released on 4<sup>th</sup> June, 2007, China's positions on the Copenhagen Climate Change Conference announced on 26<sup>th</sup> November, 2009 and the submission of China's Intended Nationally Determined Contributions (INDCs) to the United Nations Framework Convention on Climate Change (UNFCCC) on 30<sup>th</sup> June, 2015. These three policy moments indicate the milestones of addressing climate change in China. This PhD work analyses the policies identifying the climate-related storylines and discussing their similarities and differences to those revealed in the climate change discourse of the newspapers.

Also, this PhD research identifies 12 key actors representing different types of organisations. Chapter 6 shows the categorisation and frequency of these actors. First of all, these actors are identified and selected based on their frequency of being cited in the newspapers (see Appendix B). They are identified as the most frequent actors across the newspapers such as the UN, the IEA and Siemens.

However, not all key actors are the most frequently identified news sources, but are selected because they are better cases to demonstrate the various climate discourses. In the categorisation of foreign NGOs, the World Wide Fund for Nature

(WWF) seems to be as popular as Greenpeace. However, as reviewed in Chapter 2, Greenpeace successfully gains the attention from international media. In this sense, it is very important to observe how Greenpeace was represented in the newspapers in China. In the categorisation of Chinese academia, the Chinese Academy of Social Sciences is identified because it is an important academic body involved in international climate change negotiations (Wübbeke, 2013). Tsinghua University is identified because it is a top-level academic unit in China. These two actors are very frequent news sources cited in the coverage following the Chinese Academy of Sciences (CAS) in the group of academic actors. It is important to note that due to lack of being identified as stable news sources, my work does not select foreign academic actors as a case study conducted in Chapter 6.

The US and the EU are most frequent actors cited in the coverage in the categorisation of foreign governments. They are both identified because they have different positions in climate change governance and policies. India is not as frequent as them being cited in the coverage. However, India is the most frequent actor among developing countries cited in the climate coverage. Also, India has been cited to share a wide range of positions with China in international climate negotiations in the coverage. In this sense, it is very interesting to see how the newspapers represent the voice of India in the climate coverage.

My thesis identifies and selects the official documents made by these actors around the critical moments namely 2007, 2009 and 2015 (see Table 4.1). Their documents are analysed through identifying storylines. They are used to compare the storylines linked to the actors cited in the climate coverage to their actual positions. This analysis can demonstrate how the newspapers have cited these actors in the coverage. It is worth noting that this research fails to identify a document from Tsinghua University around the year 2007. This is because the University has published the Low Carbon Development Report only since 2010. This, however, does not affect the general analysis of the constructed climate discourses in the present research.

**Table 4. 1 Key actors and documents sources**

<b>Actors</b>	<b>Documents sources</b>	<b>Dates</b>
<b>UN</b>	2007 Report of the Secretary-General on the work of the Organization	31/08/2007
	2009 Report of the Secretary-General on the work of the Organization	04/08/2009
	2015 Report of the Secretary-General on the work of the Organization	22/07/2015
<b>IEA</b>	World Energy Outlook 2007: China and India Insights	23/11/2007
	World Energy Outlook 2009	30/11/2009
	World Energy Outlook 2015	10/11/2015
<b>SGCC</b>	2007 Report of Corporate Social Responsibility of SGCC	01/2008
	2009 Report of Corporate Social Responsibility of SGCC	01/2010
	2015 Report of Corporate Social Responsibility of SGCC	02/2016
<b>Siemens</b>	2007 Annual Report	28/11/2007
	2009 Sustainability Report	11/2009
	2015 Sustainability Information	11/2015
<b>FoN</b>	Strategic Planning Report between 2008 and 2012	09/2008
	2009 Annual Report	01/2010
	2015 Official blogs	12/2015
<b>Greenpeace</b>	2007 Annual Reports	27/11/2007
	2009 Annual Reports	01/2010
	2015 Annual Reports	01/2016
<b>CASS</b>	2007: Stern Report and potential effects on post-Kyoto negotiations	02/2007
	2009 Annual Report on Actions to Address Climate Change	29/11/2010
	2015 Annual Report on Actions to Address Climate Change	11/2015
<b>Tsinghua</b>	N/A	-
	2010 China's Low Carbon Development Report	02/2011
	2015 China's Low Carbon Development Report	03/2016
<b>US</b>	The President's Achievements at the G-8 Summit, Germany	08/06/2007
	Obama's Speech on Climate Change	22/09/2009
	Remarks by President Obama at the First Session of COP21	30/11/2015
<b>EU</b>	Climate change and the EU's response	15/02/2007
	The Copenhagen climate change negotiations: EU position and state of play	12/10/2009
	EU agrees position for Paris climate change conference	18/09/2015
<b>India</b>	PM's opening remarks at the meeting of the Council on Climate Change	13/07/2007
	Intervention by PM on Climate Change CHOGM Summit 2009	27/11/2009
	Statement by PM at COP 21 Planetary Paris	30/11/2015
<b>California</b>	Climate Action Team Report	20/04/2007
	Climate Action Team Report	04/2010
	Climate Action Team Report	02/2015



#### 4.4 Mapping and analysing constructed discourse networks

As a result of searching for the key-term 'climate change', the total number of identified and analysed articles is 1296 collected from the three newspapers (see Table 4.2). Because *Southern Weekend* is issued weekly, its number is much smaller compared to the other two newspapers.

**Table 4. 2 Identified and collected articles from three newspapers in China**

Newspapers Year	<i>People's Daily</i>	<i>China Daily</i>	<i>Southern Weekend</i>
2007	148	233	11
2009	269	217	45
2015	144	217	11
Total	561	667	68

Note: '2007' denotes the period from 4<sup>th</sup> December, 2006 to 3<sup>rd</sup> December, 2007; '2009' denotes the period from 26<sup>th</sup> May, 2009 to 25<sup>th</sup> May, 2010; '2015' denotes the period from 1<sup>st</sup> January to 30<sup>th</sup> December, 2015.

As a result of coding data, there are 3567 statements which are categorised in 32 storylines. Chapter 6 shows these storylines and the examples of coding statements. There are 577 actors identified, which are demonstrated in the list of abbreviations of actors represented in climate discourse networks (see Appendix G).

It is worth noting that *People's Daily* and *Southern Weekend* are newspapers written in Chinese. Therefore, being a native Chinese speaker, I have been coding and analysing the statements in English based on their meanings in Chinese texts and contexts. The examples of statements written in Chinese have been translated into English, which are followed by the original Chinese characters. I was personally responsible for all translations.

The interpretivist approach does not mean an absolute refusal to use numbers for showing and demonstrating the qualitative data (Silverman, 2015 pp. 11-19). Overcoming the debate between qualitative and quantitative research can strengthen social scientific studies via employing various methods (Haggett and Toke, 2006 pp. 103-104). Therefore, this PhD thesis uses the numbers for showing the dynamic trends of the storylines and various actors cited in the climate coverage. The rise and fall of the storylines, actors and discourses is explained in a context-specific position. It is worth noting that using numbers does not mean the

employment of content analysis. Identifying the storylines and categorising them into discourses depends on the meanings in textual and contextual situations. Therefore, Chapter 5 and 6 uses numbers to show the general overview of various storylines constructed in and actors cited in the coverage in order to complement the ability to communicate this research.

#### **4.4.1 Discourse Network Analysis and its software**

Discourse network analysis can make a discourse visualised (Leifeld, 2010b). Discourse Network Analyser is software applied to carry out 'qualitative, category-based content analysis' (Leifeld, 2010a p. 4). This software can be used to show different forms of networks between concepts and actors. My thesis analyses affiliation discourse networks mapping actors, concepts and their relationships (Leifeld, 2010a p. 4). This shows a bipartite graph with two modes, namely actors and concepts. An actor (namely claim-maker) could agree with concepts (namely storylines). Because very few actors can be cited to show their disagreements in the Chinese newspapers, data analysis involves mapping the networks of actors and concepts based on their agreements. A discourse contains a set of storylines. A dominant constructed discourse is one that is linked to a wide range of actors and particularly governmental bodies cited in the climate coverage.

It is important to identify a main problem of using software for coding qualitative data. Over-reliance on computers and software could lead to a very quantitative and positivist research (Gilbert et al., 2014 pp. 221-222, Bazeley and Jackson, 2013 pp. 6-7). Researchers could rely on software for coding, trust in the results of data and ignore a broader context (Johnston, 2006 pp. 383-385, Bazeley and Jackson, 2013). Therefore, my work overcomes this problem with a combination of an interpretivist approach and the software of qualitative data analysis. On the one hand, Discourse Network Analyser is used as the software for coding, visualising and managing qualitative data effectively. On the other hand, the process of coding data is conducted with the considerations of textual meanings and social contexts of the qualitative data.

#### **4.4.2 Interpretivist Discourse Network Analysis**

In order to ensure consistency in ontology, epistemology and methodology, this PhD thesis selects Discourse Network Analysis as an analytical tool. The Discourse

Network Analysis is conducted simply to display the qualitatively-generated constructed discourse networks rather than to conduct any testing of hypotheses or of causal mechanisms.

There are many attempts to cover the theoretical and methodological gaps between interpretivist discourse approach and discourse network analysis. Leifeld and Haunss (2012 p. 383, pp. 401-402) conduct an empirical study measuring and tracking the evolution of discourses with discourse network analysis. Muller (2015 pp. 378-383) uses a scientific, objective, and standardised perspective to measure dominant discourses. Similarly, Di Gregorio (2012 p. 4) emphasises the importance of the density of discursive interaction. However, although these studies contribute to the development of discourse network analysis, they ignore the ontological and epistemology positions of the discourse approach. These attempts just support their empirical, causal, and quantitative research. But, they did not focus on an interpretivist position.

As explained in Chapter 3, this thesis is based on social ontological and epistemological positions. In this sense, my research should be supported by the qualitative aspect of discourse network analysis. Rydin (2013 p. 27) uses social network software for mapping the relationships of actors and discusses the visualised network which is a qualitative research rather than a quantitative study. Therefore, this research method can be called the Interpretivist Discourse Network Analysis (IDNA).

Also, this PhD research emphasises the interpretivist nature of discourse. In fact, objective, empirical, quantitative and standardised research are conducted by people. The process of identifying, coding, and analysing discourses depends on how researchers understand them. The process of understanding is determined by subjective interpretation, social background, discursive context, and textual meaning. These elements are very complicated in the social reality. They cannot be reduced to an objective understanding common to everyone. Therefore, this research design uses an interpretivist approach to discourse network analysis.

#### **4.4.3 Visualising climate change discourse network**

In order to better understand the climate change discourse networks, these storylines and claim-makers are identified and visualised through the data

visualisation software 'visone' in Chapter 7. In the visualised climate change discourse networks, storylines and actors are marked with black squares and grey circles respectively. Governmental actors are marked with purple triangles. Main discourses are marked with black squares in a larger size in the diagrams of dominant discourse networks. Using this way of visualising discourse networks, this PhD thesis can reflect how various storylines are structured in the constructed climate discourse networks and how they are linked to governmental actors forming the dominant constructed discourse networks.

## **4.5 Summary**

This chapter critically reviews the types of research design of social sciences and provide the rationale for conducting a comparative longitudinal study. Based on the research design, my PhD thesis looks at dynamic constructed climate change discourses and discourse networks over time and their differences over the three newspapers.

This chapter discusses the advantages of conducting discourse analysis of newspapers and states the weaknesses of other types of data collection. Also, it demonstrates the details of selecting and identifying the news articles.

This chapter shows my contribution to the development of Interpretivist Discourse Network Analysis (IDNA). The IDNA overcomes a theoretical gap being consistent with a social ontological and social epistemological position. It is conducted to display the qualitative aspects of network analysis rather than to test hypotheses or establish causal mechanisms.

The next chapter will exhibit and explain the constructed storylines in the climate change discourses of the newspapers in China. Also, it will explain why these storylines are categorised into three dominant discourses, namely development, ecological modernisation and low carbon.

## Chapter 5: Dynamic constructed climate change storylines and discourses in the three newspapers in China

Drawing on Chapter 4, this chapter aims to identify and analyse the constructed storylines related to climate change issues and explain their categorisation in the selected newspapers. As discussed in Chapter 2, this chapter explains the features of the constructed storylines and discourses in the coverage. As revealed in Chapter 3, a constructed discourse contains a set of storylines. My thesis identifies how storylines are grouped into three constructed discourses namely development, ecological modernisation, and low carbon on the basis of categorisation of various storylines (see Table 5.1). This chapter compares and contrasts how the different newspapers present these storylines in different combinations. Also, this chapter demonstrates and explains the emergence and decline of the constructed storylines and discourses (see Appendix A). These main findings are in response to the key research question: how have climate change issues and various social actors been constructed and represented at critical points over time in newspapers in China?

As discussed in Chapter 1 and 2, these storylines are also categorised into five dimensions of climate change issues; namely economy, energy and emissions, public involvement, science and ecology and responsibility (see Table 5.1). The constructed climate change discourse has been evolving across these dimensions in the coverage. *Economy* refers to the economic dimensions of addressing climate change including economic priority and business opportunity. *Energy and emissions* refers to energy issues including the industrial system, technology, the means of controlling coal and the targets for addressing climate change. *Public involvement* refers to public awareness, behaviour and participation. *Science and ecology* shows a constructed discursive change from the scientific recognition of climate change to the importance of resilience to the issue. *Responsibility* refers to different interpretations of the responsibilities for emission reduction constructed and identified in the coverage.

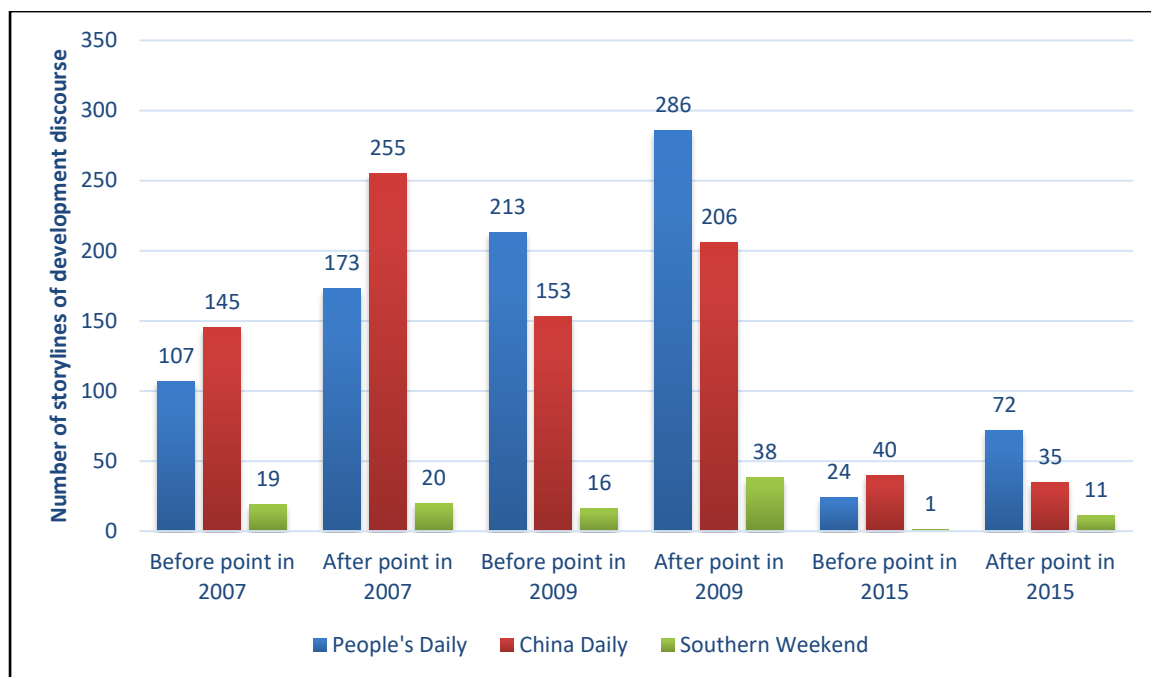
**Table 5. 1 Three major discourses and their storylines**

<b>Discourses</b> <b>Storylines</b>	<b>Development</b>	<b>Ecological Modernisation (EM)</b>	<b>Low carbon</b>
<b>Economy</b>	(1) Development	(17) Economic tools	(23) Economic opportunity
<b>Energy and Emissions</b>	(2) Energy consumption (3) Energy mix (4) Carbon sink (5) No cap (6) No target	(18) Transformation (19) Tech (20) Carbon intensity	(24) Low carbon energy (25) Market (26) Transparency
<b>Public involvement</b>	(7) Awareness	(21) Behaviour	(27) Participation
<b>Science and ecology</b>	(8) Adaptation (9) Ecology (10) Research (11) Scientific certainty (12) Uncertainty	(22) Surviving	(28) Resilience (29) Local
<b>Responsibility</b>	(13) Developed resp (14) Different resp (15) Diplomacy (16) US resp		(30) China resp (31) Developing resp (32) Major emitters

Note: (13) 'developed resp' denotes the responsibility of developed countries; (14) 'different resp' denotes different responsibilities between developed and developing countries; (16) 'US resp' denotes the US responsibility; (19) 'tech' denotes technology; (30) 'China resp' denotes China's responsibility; (31) 'developing resp' denotes the responsibility of developing countries.

## **5.1 The development discourse and its decline**

The development discourse has been growing in 2007 and 2009 and it has declined particularly in 2015 in *People's Daily* and *Southern Weekend* (see Figure 5.1). *China Daily* witnessed the graduate decline in 2009 and 2015. Although the development discourse declined, it has not disappeared in the constructed climate change discourse networks. As discussed in Chapter 4, the term 'development' is used to label this discourse and its storylines.



**Figure 5.1 Trends in development discourse across the critical points**

Also, Table 5.2 shows the frequency of each storyline and the percentage in the total three discourses constructed in one newspaper across a critical moment. For example, there are 60 statements of the storyline 'development' identified in the coverage of *People's Daily* around the critical moment in 2007. The frequency accounts for 16.0% in the total storylines of the three discourses (N=376) identified in *People's Daily* around the moment in 2007.

My finding supports the expectation that the climate change discourse in *People's Daily* can be constructed in line with Chinese official positions. Particularly after the critical point in 2009, *People's Daily* obviously constructed a strong attitude towards defending the Chinese national interests in addressing climate change issues. The number of the storylines 'development', 'different resp' and 'developed resp' is much higher in *People's Daily* than *China Daily* (see Table 5.2). *China Daily* witnessed a general decline of the development discourse constructed across the three critical points. Also, *China Daily* could construct the rise of the storyline 'uncertainty' in 2009. This demonstrates that *China Daily* could provide a discursive space beyond policy rhetoric. *Southern Weekend* is not very sensitive to fundamental governmental positions of climate change such as the storyline 'different resp' constructed in the coverage.

**Table 5. 2 Frequency of storylines of development discourse**

Storylines	Year	People's Daily		China Daily		Southern Weekend	
		Frequency	%	Frequency	%	Frequency	%
<b>(1) Development</b>	2007	60	16.0%	62	9.6%	4	8.0%
	2009	117	13.7%	66	9.3%	5	4.0%
	2015	11	3.3%	12	2.7%	1	3.0%
<b>(2) Energy consumption</b>	2007	21	5.6%	28	4.3%	4	8.0%
	2009	17	2.0%	3	0.4%	0	0%
	2015	0	0%	0	0%	0	0%
<b>(3) Energy mix</b>	2007	17	4.5%	26	4.0%	0	0%
	2009	34	4.0%	39	5.5%	1	0.8%
	2015	1	0.3%	8	1.8%	0	0%
<b>(4) Carbon sink</b>	2007	8	2.1%	13	2.0%	0	0%
	2009	26	3.0%	7	1.0%	0	0%
	2015	2	0.6%	0	0%	0	0%
<b>(5) No cap</b>	2007	3	0.8%	7	1.1%	0	0%
	2009	5	0.6%	4	0.6%	3	2.3%
	2015	0	0%	0	0%	0	0%
<b>(6) No target</b>	2007	3	0.8%	5	0.8%	1	2.0%
	2009	7	0.8%	13	1.8%	3	2.3%
	2015	0	0%	0	0%	1	3.0%
<b>(7) Awareness</b>	2007	8	2.1%	24	3.7%	2	4.0%
	2009	10	1.2%	17	2.4%	0	0%
	2015	1	0.3	0	0%	0	0%
<b>(8) Adaptation</b>	2007	18	4.8%	20	3.1%	0	0%
	2009	17	2.0%	4	0.6%	0	0%
	2015	7	2.1%	2	0.5%	0	0%
<b>(9) Ecology</b>	2007	40	10.6%	76	11.8%	4	8.0%
	2009	20	2.3%	8	1.1%	3	2.3%
	2015	2	0.6%	6	1.4%	1	3.0%
<b>(10) Research</b>	2007	10	2.7%	9	1.4%	3	6.0%
	2009	7	0.8%	6	0.8%	0	0%
	2015	7	2.1%	2	0.5%	0	0%
<b>(11) Scientific certainty</b>	2007	19	5.1%	52	8.0%	9	18.0%
	2009	16	1.9%	21	3.0%	9	7.0%
	2015	6	1.8%	14	3.2%	6	18.2%
<b>(12) Uncertainty</b>	2007	1	0.3%	4	0.6%	0	0%
	2009	1	0.1%	11	1.6%	9	7.0%
	2015	0	0%	2	0.5%	0	0%
<b>(13) Developed resp</b>	2007	19	5.1%	42	6.5%	7	14.0%
	2009	105	12.3%	74	10.5%	5	4.0%
	2015	22	6.7%	12	2.7%	3	9.1%
<b>(14) Different resp</b>	2007	46	12.2%	17	2.6%	3	6.0%
	2009	109	12.7%	42	5.9%	9	7.0%
	2015	37	11.2%	17	3.9%	0	0%
<b>(15) Diplomacy</b>	2007	2	0.5%	4	0.6%	2	4.0%
	2009	6	0.7%	9	1.3%	0	0%
	2015	0	0%	0	0%	0	0%
<b>(16) US resp</b>	2007	5	1.3%	11	1.7%	0	0%
	2009	2	0.2%	35	5.0%	7	5.5%
	2015	0	0%	0	0%	0	0%



## 5.1.1 Economy

### (1) Development

Economic development is identified as a key element of the constructed storyline 'development' referring to economic and social development and poverty eradication.

'But China, which has tens of millions of people trying to solve problems with basic living produces "survival emissions"' (see 'China has a 'differentiated responsibility' to climate change', *China Daily*, 09/06/2007).

The China Meteorological Administration (CMA) was cited to make the above statement in the coverage. It is worth noting that 'survival emissions' clarified in the statement reflects that developing countries have the rights of utilising natural resources to secure basic needs for survival. It is reasonable to understand the concept of sustainable development as an idea of supporting a balance between economic development and environmental protection (Dresner, 2008 p. 70, UNEP, 1992). However, in the case of constructed climate discourse of China, the term 'sustainable development' has been widely used for emphasising the importance of long-term development to a developing country. Therefore, the climate coverage constructs a clear link between sustainable development and economic priority.

Also, this storyline indicates that developing countries should have the rights of economic development in terms of climate change issues.

'Economic development is the material basis for addressing climate change. Without the economic development of developing countries, there would not be the basis for making an effort to address climate change. According to the United Nations Framework Convention on Climate Change, economic and social development and poverty eradication should be the primary task of developing countries. (经济发展是应对气候变化的物质基础。没有发展中国家的经济发展，应对气候变化的努力就是无本之木。《联合国气候变化框架公约》明确规定，经济社会发展和消除贫困是发展中国家缔约方的首要任务。)' (See 'The summit on energy security and climate change of major economies was held'经济大国能源安全和气候变化论坛领导人会议举行, *People's Daily*, 11/07/2009)

This statement was constructed to be linked to Dai Bingguo, the State Councillor of China, reiterating the fundamental principle of addressing climate change. This demonstrates that in the constructed discourse the Chinese government appeared to remain highly concerned about economic

development. Also, the statement shows an emphasis on the rights of developing countries to secure economic growth and poverty eradication. This demonstrates the significance of the storyline 'development' in the constructed climate discourse.

The development storyline had been constructed to be growing in 2007 and 2009 and declined in 2015 (see Table 5.2). This decline can be demonstrated by the rise of the low carbon discourse. However, within the six months after the critical point in 2009 particularly in *China Daily* and *People's Daily*, the growth of the storyline 'development' demonstrates that various actors were cited in defending the fundamental national interests of China during the Copenhagen climate conference.

It is worth noting that the decrease in the frequency of the storyline in 2015 does not mean a decline of its political importance. In 2015, key governmental actors such as the Chinese central government, the State Council and NDRC were linked to this storyline in the constructed discourse.

### **5.1.2 Energy and emissions**

Under the development discourse, the category of energy and emissions covers the following storylines about energy consumption, energy mix, carbon sinks, carbon cap and trading system and legally-binding targets. They are categorised into the development discourse because they do not involve substantial action on emissions reduction.

#### **(2) Energy consumption**

The storyline 'energy consumption' refers to the policy of energy conservation and emission reduction and the target of energy intensity clarified in *the National Climate Change Programme* in 2007.

The storyline 'energy consumption' was identified to be dominant in the constructed climate change discourse in 2007. As the quotation below illustrates, energy conservation was constructed as a means of controlling emissions in the coverage. However, the main feature of this storyline is an emphasis on energy consumption rather than direct control for carbon emissions.

'The government is working to turn energy-saving targets into goals for CO<sub>2</sub> emission' (see 'New paths to reach green goal', *China Daily*, 15/06/2007)

With the rise of 'carbon intensity' and 'low carbon energy', the storyline 'energy consumption' declined in 2009 and even disappeared in 2015 across the newspapers (see Table 5.2). This is because various actors were represented to support the low carbon energy system in the coverage. *People's Daily* still emphasised the storyline in 2009 while *China Daily* paid much less attention to it and *Southern Weekend* even did not mention it.

### **(3) Energy mix**

This storyline refers to improving energy mix and reducing heavy dependence on coal consumption. Therefore, developing renewable energy, using natural gas and oil and cleaning coal are seen as the important means of improving the energy mix and this has been constructed in the climate coverage.

While developing and utilising renewable energy is a positive element of addressing climate change, it lacks a clear implication for a low carbon energy system. This storyline implies that raising the level of renewable energy does not conflict with burning coal and using fossil fuels. In this sense, this storyline does not focus on direct controls for carbon emissions and fossil fuel consumption, especially regarding coal in the constructed discourse.

The storyline had been popular in 2007 and 2009 and declined dramatically in 2015 across the newspapers (see Table 5.2). The main reason for this change is that the climate coverage has constructed and witnessed discursive rise of storylines around reaching a carbon peak and controlling coal consumption.

### **(4) Carbon sinks**

The notion of carbon sinks, referring to an idea to raise the forest coverage and prevent deforestation, was identified as an effective means of absorbing carbon dioxide and achieving emissions reduction targets in the constructed discourse. After the critical point in 2007 in *China Daily*, a prominent change is an increase in the frequency of the storyline 'carbon sink' constructed in the coverage (see Table 5.2).

While the storyline was very popular in 2007 and 2009, it declined dramatically in 2015 in *People's Daily*. However, *China Daily* constructed various options of climate solutions and it witnessed the gradual decline of the storyline. *Southern Weekend* constructed its weak sensitivity to official discourse as it did not involve this storyline across the critical points. Its decline is mainly because various actors particularly governmental bodies were cited to support controlling coal consumption in the coverage in 2015.

### **(5) Resistance to carbon cap and trading system**

The storyline 'no cap' refers to a statement that the cap and trading approach was not acceptable. This approach suggests that each country should set a cap on its emissions and sell or purchase carbon allowances. China and the US were cited in embracing this storyline particularly in *China Daily* in 2007. These two major emitters and economies were cited to be reluctant to take substantial action on emissions reduction in the coverage.

However, the US and China were linked to different interpretations of the storyline 'no cap' constructed in the coverage. The US was cited to worry about the negative influence over economic growth with the adoption of the emissions trading system. China was linked to a concern about developed countries using the carbon and trading system for shirking their responsibilities (Bjørkum, 2005 pp. 28-29, Friman, 2013 p. 226). Although the US and China were cited to have different concerns about the carbon cap and trading system, they were linked to the storyline in the constructed discourse networks.

Being similar to other storylines under the development discourse, the storyline 'no cap' declined dramatically in 2015 (see Table 5.2). The disappearance of the storyline demonstrates that the carbon market was no longer an unpopular storyline in the constructed climate change discourse networks in the coverage in 2015. For this reason, the carbon trading system was reinterpreted as an effective means for boosting low carbon economy and addressing climate change.

### **(6) Resistance to targets**

The storyline 'no target' refers to a statement that any specific or mandatory target of reducing emissions is unacceptable and unrealistic. Given the high

priority of economic development, an official from the NDRC was linked to the below statement delivering an opposition to the mandatory targets of emissions reduction. The storyline 'no target' was used to construct China as a country which does not have obligations of setting the mandatory target.

'A mandatory quota for China now will not be fair, therefore it cannot accept it' (see 'Plan to fight climate change next week', *China Daily*, 01/06/2007)

In the constructed discourse, the US was cited to emphasise that it was unacceptable to set a target without the participation of major economies and emitters such as China and India. Despite disputes over multiple issues between China and the US, two countries were cited to be linked to the storyline 'no target' in the climate coverage in 2007.

In 2009, the MoFA was cited in the coverage making the below statement about China's opposition to a quantified and measurable target of reducing emissions during the Copenhagen climate conference.

'China will not set a binding carbon reduction target at the summit, despite pressure from many countries for Beijing to accept such a goal' (See 'Substantial climate deal sought after', *China Daily*, 26/11/2009)

The storyline 'no target' had been constructed mainly in *People's Daily* and *China Daily* in 2007 and particularly in 2009 (see Table 5.2). This demonstrates a decrease in resistance to a legally-binding target constructed in the coverage. However, the storyline could be found only in *Southern Weekend* in 2015. This demonstrates that *Southern Weekend* is not relevant to policy rhetoric and is different to the official newspapers.

### **5.1.3 Public involvement**

#### **(7) Awareness**

The storyline 'awareness' refers to the importance of raising public awareness and education of climate change. Chinese President Hu made the below statement identified in the coverage emphasising the importance of raising public awareness. This demonstrates that the Chinese government was cited to recognise the seriousness and reality of climate change in the constructed discourse.

'raising public education of climate change and public awareness of energy conservation and emission reduction and encouraging every

citizen to make an effort in mitigation and adaptation (开展全民气候变化宣传教育，提高公众节能减排意识，让每个公民自觉为减缓和适应气候变化作出努力) (See 'A speech on the fifteenth informal meeting of Asia-Pacific Economic Cooperation' '在亚太经合组织第十五次领导人非正式会议上的讲话', *People's Daily*, 08/09/2007)

However, this storyline does not involve public behaviour change and the broad participation of various actors including NGOs and business. Also, it does not involve any agency of the public to challenging existing development path. Therefore, this storyline is categorised into the development discourse. According to Table 5.2, this storyline dramatically declined in 2015 as various actors were linked to the importance of behaviour change and public participation. This change demonstrates China's discursive shift from recognition to action was constructed in the climate coverage.

#### **5.1.4 Science and ecology**

Under the development discourse, the category of science and ecology covers the following storylines about adaptation, ecology, research, scientific certainty and uncertainty. These storylines are categorised into the development discourse because they involve problem definition and/or identification and they lack emphasis on action to deal with climate change.

### **(8) Adaptation**

The storyline 'adaptation' refers to the importance of adapting to climate change. The UNDP was linked to the below statement emphasising local action on adapting to climate change in China. The climate coverage constructed China as the victim of climate change confronting challenges such as the rising sea levels.

'it is expected that efforts to adapt to climate change could eventually be included into local development plans in pilot areas' (See 'New programme will take climate fight to provinces', *China Daily*, 18/04/2007)

However, this storyline declined in 2009 and further in 2015 in the climate coverage (see Table 5.2). This demonstrates that the newspapers constructed a positive attitude towards addressing climate change. It appears to suggest that some storylines such as economic tools and low carbon energy were emerging in the constructed climate change discourse. Taking action on

emission reduction is identified to be more important than recognising adaptation constructed in the coverage.

### **(9) Ecology**

The storyline 'ecology' refers to recognising ecological concern about negative impacts of climate change such as natural disasters and extreme weather. The storyline 'ecology' was very popular in 2007 (see Table 5.2) when the climate change issues were rising in media's agenda in China (see Chapter 2). Particularly, the year 2007 witnessed the release of fourth IPCC report which revealed a clear scientific consensus on the reality of climate change.

The storyline is categorised into the development discourse rather than the notion of ecological modernisation because it is used to reveal and recognise the ecological and environmental problems rather than solve the issues constructed in the coverage. The notion of ecological modernisation does not only raise ecological concerns but also it focuses on solving environmental problems through fixing existing industrial systems and political institutions. Apparently, the storyline does not meet the core element of ecological modernisation. Also, the storyline 'ecology' was, to a large extent, used to demonstrate in the constructed discourse that China is the victim of climate change and that it needs to acquire financial and technological transfers from developed countries for adaptation. Therefore, due to its lack of a clear idea for proactive action, the storyline is categorised into the development discourse.

This storyline had declined in 2009 and 2015 in the constructed climate change discourse. Due to the rise of concerns about the negative impacts of climate change on human security and survival, it was discursively replaced by the storyline 'surviving' in the constructed discourse.

### **(10) Research**

The storyline 'research' refers to a statement about scientific studies on climate change and its solutions. This storyline could be found particularly in 2007 as the scientific research was rising in media's agenda in China. It is reasonable to assume that scientific research is a key element of understanding the nature and mechanism of climate change. This storyline is categorised into the

development discourse simply because it does not involve substantial action on climate change.

'The effort at networked long-term forecasting of climate conditions and their impacts is still inadequate' (see 'Atmospheric change', *China Daily*, 20/08/2007)

As the quotation illustrates, the China Academy of Meteorological Science (CAMS) was linked to the statement expressing the concern about an inadequate effort in scientific research on climate change. However, in 2009 and 2015, it declined dramatically because the research involved resilience to climate change beyond the scientific discovery in the constructed discourse.

### **(11) Scientific certainty**

In 2007 in *China Daily*, the storyline 'scientific certainty' was mentioned very frequently and was linked to a wide range of academic actors such as the University of East Anglia (UEA) and the Chinese Academy of Sciences (CAS). However, this storyline was not widely linked to the Chinese governmental actors in the constructed discourse. This is mainly because these scientific researches on climate change were conducted by those universities and institutes rather than governmental actors. The IPCC could be cited to put an emphasis on the scientific certainty of climate change in the coverage. The storyline was also linked with the UNDP because the international organisations were cited in the coverage raising the importance of the IPCC report.

*China Daily* obviously constructed the storyline in climate coverage more frequently than *People's Daily* (see Table 5.2). This supports an assumption that *China Daily* could provide a broader range of storylines for a wider range of actors. This storyline has declined in *People's Daily* and *China Daily* particularly in 2015 because it had been widely recognised. However, in *Southern Weekend*, the storyline remained popular in 2015. This demonstrates *Southern Weekend* was different to the official newspapers.

### **(12) Uncertainty**

While the scientific reality of climate change is not a controversial topic in China, it is worth noting that the storyline 'uncertainty' could be obviously identified in



the constructed climate discourse particularly after the critical point in 2009 in *China Daily* and *Southern Weekend* (see Table 5.2).

‘The IPCC report offered no definite scientific basis for the sensitivity of climate change to atmospheric CO<sub>2</sub> concentration, although a warming trend was witnessed in the latter half of the 20<sup>th</sup> century’ (See ‘Skeptics turn up the heat’, *China Daily*, 03/02/2010)

An expert from the CAS was cited in the above statement to construct doubt about the IPCC report in the coverage in *China Daily*. This storyline refers to the view on the scientific uncertainty of climate change. This discovery challenges previous academic literature that sceptical perspective of climate change did not exist in China (Wu, 2009 pp. 158-163, Schröder, 2011 p. 21). It is very interesting to find that the storyline emerged especially since January, 2010 rather than November, 2009 when the Climategate incident was constructed in *China Daily*. The storyline was developed with the rising criticism of scientific mistakes in the 2007 IPCC report. This prominent example demonstrates that *China Daily* is an official newspaper but it allows various voices. However, *People’s Daily* reflected its nature of mouthpiece and did not provide a platform for the substantial discussion on scientific uncertainty.

Also, the storyline ‘uncertainty’ was rising in *Southern Weekend* after the critical point in 2009. However, this is slightly different to the storyline constructed in *China Daily*. Firstly, while the storyline was linked to scientific mistakes in the IPCC report in *China Daily*, the sceptical view on climate change was relevant to the Climategate incident in *Southern Weekend*. These actors around the storyline were constructed to complain about the absence of the view on scientific uncertainty in the Copenhagen conference. Secondly, while the storyline was discursively linked to those academic actors from China including NCC, CAS and Peking University (Peking) in *China Daily*, the sceptical view was completely made by foreign academic institutions in *Southern Weekend*. This demonstrates that *Southern Weekend* provides a discursive platform for discussing the Climategate incident and representing foreign academic actors in the coverage.

Apparently, the storyline ‘uncertainty’ prevailed only after the critical point in 2009 in *China Daily* and *Southern Weekend*. On the one hand, the sceptical view on the reality of climate change has never become a mainstream idea

identified in the constructed climate discourse in China. On the other hand, China's recognition of the scientific certainty and reality does not mean that the sceptical view does not discursively exist in the climate coverage of China.

### **5.1.5 Responsibility**

Under the development discourse, the category of responsibility covers the following storylines mainly because they emphasise the main responsibilities of developed countries, particularly including the US, rather than raise the key role of major emitters like China in addressing climate change.

#### **(13) The responsibility of developed countries**

One of fundamental China's positions on climate change is an emphasis on the responsibility of developed countries for reducing emissions. This is mainly because China identifies the developed countries as main contributors to climate change since the Industrial Revolution. In this sense, the Western advanced countries should have capabilities and historical responsibilities in terms of addressing climate change. The World Wide Fund for Nature (WWF) was cited as a news source for the below quotation demonstrating that developed countries were required to take the responsibility of substantial emission reduction.

'It could be a groundbreaking document to pave the way for deep emissions cuts by developed countries' (see 'Climate change may have 'irreversible' impacts', *China Daily*, 17/11/2007)

This storyline had been growing in 2007 and 2009 in *People's Daily* and *China Daily*. And it declined in 2015 in the coverage in the three newspapers (see Table 5.2). Being the mouthpiece, *People's Daily* constructed climate coverage using this storyline more frequently than *China Daily* after the critical point in 2009 because of its accordancy with Chinese governmental positions around the Copenhagen climate conference.

However, while the frequency of the storyline declined in 2015, the Chinese governmental actors remained linked to this fundamental position in the coverage. This demonstrates that, despite China's positive attitude towards addressing climate change, the newspapers did not abandon its focus on the historical, financial and technological responsibilities of developed countries in the constructed discourse.

#### **(14) Different responsibilities**

The storyline 'different resp' in the constructed discourse networks refers to the responsibility of developed countries in climate change issues. Its main difference to the storyline 'developed resp' is its focus on the principle of common but differentiated responsibilities between developed and developing countries. Developed countries have the historical responsibilities for reducing emissions while developing countries have the rights of economic development and poverty eradication. As discussed in Chapter 1, the principle is not only an important element of existing international climate change institutions but also it is a fundamental position of China.

Also, this storyline refers an emphasis on the key role of existing international climate change institutions such as the UNFCCC and the Kyoto Protocol. Having been linked to this storyline, some proactive actors of supporting low carbon are categorised into the constructed development discourse. For example, after the critical point in 2009, Denmark was cited as a news source supporting the existing international climate change institution and the fundamental principle of common but different responsibilities by *People's Daily*. Therefore, Denmark was linked to the storyline and it was identified in the constructed development discourse network. This is not to say that Denmark changed its positions towards discourse on developmental priority. Instead, Denmark was cited as an actor of supporting the interests of developing countries and global climate justice in the constructed discourse network. Its statement on enhancing the existing international climate institutions could be used to increase the political legitimacy of Chinese governmental positions in the coverage.

The frequency of the storyline in the three newspapers reached its peak in 2009 and decreased in 2015 (see table 5.2). *People's Daily* constructed a very strong emphasis on the principle and even had a high frequency of the storyline in the coverage in 2015. It thus supports the expectation that *People's Daily* is accordance with policy rhetoric. *China Daily* paid less attention to this storyline than *People's Daily*. This finding confirms the nature of *China Daily* which can reflect official voices but not necessarily be in accordance with policy rhetoric.

*Southern Weekend* was not sensitive to this fundamental governmental position as the storyline could not be identified in its discourse networks in 2015.

### **(15) Diplomacy**

The storyline 'diplomacy' refers to China's concern about international pressure and national reputations in terms of climate change. As the quotation below demonstrates, the Ministry of Foreign Affairs (MoFA) was cited to express a concern about international criticism and pressure on China.

'The international community is concerned about China's emissions, which are huge as a whole and have triggered some criticism' (see 'China must cut emissions to slow global warming', *China Daily*, 23/11/2007)

This storyline was constructed to defend national efforts in emission reduction and demonstrate realistic obstacles to addressing climate change in China. In this sense, this storyline shows that China was constructed in the coverage to complain about international pressure and criticism because it remained a developing country without an obligation of substantial emission reduction.

China's concern about national reputations is another important element of the storyline 'diplomacy'. The constructed discourse shows China's efforts to improve international reputations and raise national images. However, this storyline is not constructed to encourage China to take substantial action on climate change. It merely states the importance of China's national reputations and images in terms of climate change issues. The storyline has not been constructed very frequently in the climate change coverage in China. It reached a peak in 2009 and disappeared in 2015. This can be explained by a positive discursive shift constructed in the coverage since 2009.

### **(16) The US responsibilities**

In the climate change coverage of China, the US was constructed as a leading economy and greenhouse gases emitter having a key role in global climate change politics. Various social actors had been cited as news sources for emphasising the responsibility of the US in the constructed discourse. As the quotation below indicates, the Natural Resources Defense Council (NRDC) was cited to emphasise the role and responsibility of the US for reducing emissions in the coverage.

'The United States, the world's top emitter of carbon dioxide (CO<sub>2</sub>), one of the major GHGs causing climate change, had a responsibility to deal with rising temperatures.' (see 'China, US urged to team up on GHGs', *China Daily*, 18/05/2007)

In the climate coverage, the weak action of the US was discursively constructed as an obstacle to addressing climate change. Chinese newspapers utilised the blame for the US to defend China's fundamental positions on historical responsibility and economic priority. As shown in Table 5.2, this storyline was popular in 2007 and 2009. However, in 2015, it declined while the storyline 'major emitters' was rising. Because of close cooperation between China and the US, the responsibility of the US was discursively incorporated into the storyline concerning the common responsibility of major economies and emitters particularly in 2015.

As *People's Daily* is a mouthpiece of the Party and Government, it could not cite various actors directly for criticising the US. This is because *People's Daily* represents the Chinese governmental positions. However, *China Daily* and *Southern Weekend* can provide a broader discursive space for criticising and blaming the US particularly in 2009. This demonstrates that they are commercialised papers and can construct various voices in the coverage.

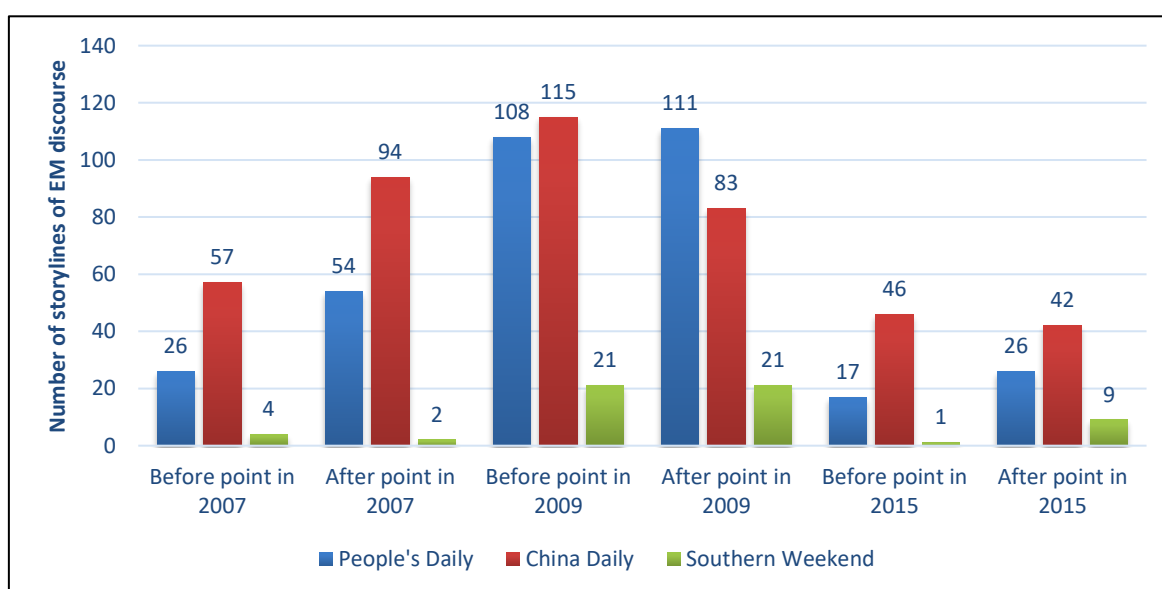
## **5.2 The rise of ecological modernisation discourse**

As the notion of ecological modernisation has been interpreted in different ways (Christoff, 2006 pp. 182-187), it contains a set of storylines. My PhD research defines and labels the EM discourse on the basis of existing literature and the context of China. As discussed in Chapter 4, it recognises other plausible interpretations of the term 'Ecological Modernisation'. My research does not necessarily coincide with other interpretations.

The year 2009 witnessed the evolution of the constructed climate change discourse from priority to development to the notion of ecological modernisation. Economic priority had been replaced by an emphasis on the balance between economic growth and ecological protection. The Ecological Modernisation (EM) discourse peaked in 2009 and declined in 2015. This is not to say that the EM discourse was discarded in 2015. This is because low carbon discourse was constructed to emerge in 2015 (see Figure 5.2 and Table 5.3).

**Table 5. 3 Frequency of storylines of EM discourse**

Storylines	Year	People's Daily		China Daily		Southern Weekend	
		Frequency	%	Frequency	%	Frequency	%
(17) Economic tools	2007	7	1.9%	43	6.6%	1	2.0%
	2009	21	2.5%	17	2.4%	3	2.3%
	2015	3	0.9%	1	0.2%	0	0%
(18) Transformation	2007	14	3.7%	19	2.9%	1	2.0%
	2009	56	6.5%	61	8.6%	15	11.7%
	2015	26	7.9%	21	4.8%	1	3.0%
(19) Tech	2007	21	5.6%	28	4.3%	1	2.0%
	2009	48	5.6%	44	6.2%	7	5.5%
	2015	7	2.1%	9	2.0%	0	0%
(20) Carbon intensity	2007	0	0%	1	0.2%	0	0%
	2009	19	2.2%	20	2.8%	6	4.7%
	2015	0	0%	1	0.2%	0	0%
(21) Behaviour	2007	13	3.5%	18	2.8%	0	0%
	2009	15	1.8%	15	2.1%	3	2.3%
	2015	3	0.9%	6	1.4%	0	0%
(22) Surviving	2007	25	6.6%	42	6.5%	3	6.0%
	2009	60	7%	43	6.1%	8	6.3%
	2015	4	1.2%	50	11.3%	9	27.3%



**Figure 5. 2 Trends in EM discourse across the critical points**

## 5.2.1 Economy

### (17) Economic tools

The storyline 'economic tools' refers to a statement that policy tools such as taxes and financial incentives can be implemented for fixing the environment and climate change. In order to secure economic development, governmental actors including NDRC and MoFA were cited as news sources expressing the importance of fixing and utilising existing economic systems in the coverage.

‘In order to achieve the target of reducing emissions during the eleventh five-year plan, China has been implementing economic policies and means. Practically, these economic measures are quite effective. (实现“十一五”节能减排目标，中国更多是利用经济手段、经济政策来推动工作。从现实效果看，措施比较有效)’ (See ‘The target of reducing emissions of 11<sup>th</sup> five-year plan will be likely to achieve’ ‘十一五节能减排目标有望现’, *People’s Daily*, 28/09/2009)

As the quotation above demonstrates, the NDRC was cited as a news source expressing the importance of implementing effective economic measures to control and reduce emissions. These measures include pricing, carbon tax and financial incentives. The constructed discourse shows that addressing climate change was discursively integrated into the national economic and social strategy, namely in the five-year national plan.

Also, economic and policy tools can be used to promote the development of clean technology and energy. The Clean Development Mechanism (CDM) is identified as an important economic tool which can be used for enhancing investments in technology. The storyline can be linked with various actors particularly business actors because the CDM can be understood as business opportunities and solutions to controlling emissions.

As discussed in Chapter 1, the CDM initially was refused by the Chinese government as it was seen as a way of Western countries shirking their responsibilities of reducing emissions. However, this storyline ‘economic tools’ could be found substantially even before the critical point in 2007 in *China Daily*. This means that the storyline could exist previously in *China Daily* when it could even not be substantially constructed in *People’s Daily* (see Table 5.3).

The storyline ‘economic tools’ was not a popular policy option constructed in *People’s Daily* until in 2009. This demonstrates that *China Daily* has a wider discursive space for various storylines than *People’s Daily* before the storyline became policy rhetoric. It is important to note that the storyline ‘economic tools’ declined in the constructed discourse 2015. This is not to say that the economic policies and tools had no longer been constructed as an effective solution to addressing climate change in the coverage. Rather, the storyline was replaced by some storylines such as ‘economic opportunity’ and ‘market’ as the ideas for the low carbon economy and the carbon cap and trading system were largely emerging in the constructed climate change discourse networks in 2015.

### 5.2.2 Energy and emissions

Under the ecological modernisation discourse, the category of energy and emissions covers the following storylines about transformation, technology and carbon intensity. This means that addressing climate change not only secures economic development but also achieves economic and industrial transformations, uses advanced technologies and controls carbon intensity.

#### (18) Transformation

As the quotation below demonstrates, the storyline 'transformation' focuses on industrial upgrade and economic structural change. An official from NDRC was cited in the coverage expressing the resolution over the achievement of economic and industrial transformation through shutting down the low energy efficient plants.

'We've already closed many small power plants, so we would not have more to close in the coming years. It's not about the goal getting bigger, but setting a practical and achievable standard' (see 'Bar for climate change goals set high for China ahead of Copenhagen', *China Daily*, 26/11/2009)

Compared to the storyline 'energy consumption' which simply relies on conserving energy, 'transformation' refers to institutional changes across sectors and regions. On the one hand, economic and industrial transformations aim to secure economic growth, and on the other hand, they are designed to improve environmental and ecological situations. Therefore, the storyline 'transformation' is categorised into the EM discourse in my PhD thesis.

In *People's Daily* and *China Daily*, the storyline 'transformation' had increased since the critical point in 2007. This demonstrates that the official papers constructed China's willingness to adjust and upgrade its industrial system in order to control emissions. The storyline even received substantial attention from *Southern Weekend* in 2009 while it declined dramatically in 2015 (see Table 5.3). This demonstrates that the idea for transformation has been substantially constructed as a key solution to addressing climate change identified in the constructed discourses across the papers.

Also, my research finds that the rising storyline of transformation was more or less related to major concerns about the financial crisis constructed in the coverage. The global financial crisis in 2008 was seen as an important factor



accelerating economic transformation in the constructed climate change discourse in 2009. Tackling the financial crisis and addressing climate change discursively converge on the storyline ‘economic transformation’ constructed in the coverage.

### **(19) Technology**

The utilisation of technology can be understood as a key element of the notion of ecological modernisation. As the quotation below demonstrates, the Chairman of the National People’s Congress of China (NPC) was cited as a news source supporting the development of advanced technologies as the means of addressing climate change in the coverage. Particularly, Carbon Capture and Storage (CCS) was constructed as a means of helping China to achieve emissions reductions and secure energy consumption and supply (Liang and Reiner, 2013).

‘Accelerating the development of technologies of clean coal, smart grid, new energy vehicles and carbon capture and storage (加快开发洁净煤、智能电网、新能源汽车、碳捕捉等技术) (see ‘deeply caring about Jianghuai – fieldwork by Chairman Wu Bangguo in Anhui’ ‘殷殷深情寄江淮——吴邦国委员长在安徽调研纪实’, *People’s Daily*, 08/07/2009)

The storyline has prevailed over time in the constructed discourses across the newspapers even though its frequency decreased in 2015 (see Table 5.3). Firstly, the development of advanced technologies has been widely constructed as a solution to addressing climate change and has been linked to various actors cited in the coverage. Secondly, the constructed discourse shows that China can utilise addressing climate change as an opportunity for acquiring technological support from advanced countries. Thirdly, the development and utilisation of advanced technologies such as the smart grid and new energy vehicles is discursively constructed as an effective means of boosting economic growth in the constructed discourse.

### **(20) Carbon intensity**

Carbon intensity refers to a ratio of carbon emissions to economic growth. While the storyline ‘energy consumption’ reflects a view that energy shortage could constrain economic development, the storyline ‘carbon intensity’ is designed to achieve the balance between controlling carbon emissions and securing

economic development. On the one hand, the target of carbon intensity involves controlling carbon emissions. On the other hand, it does not weaken the importance of economic development. Therefore, the storyline 'carbon intensity' is categorised into the EM discourse.

The storyline 'carbon intensity' emerged and prevailed in 2009 (see Table 5.3). It is worth noting that the storyline became popular in 2009 because this is triggered by the proposal of Chinese official target of reducing carbon intensity. It was replaced by the growing storyline 'low carbon energy' in 2015 in the constructed climate change discourse. Therefore, this storyline can be an ideal case for comparing the discursive links to policy rhetoric between the three newspapers. *People's Daily* constructed a clear discursive change in accordance with policy rhetoric. The storyline could be identified only in 2009 when the Chinese government delivered a promise to reducing carbon intensity. *China Daily* constructed a broader discursive space for policy options as the storyline could be clearly constructed before critical point in 2009 and even in 2007. *Southern Weekend* paid attention to the storyline in 2009. However, it was merely mentioned by an academic actor before the critical point in *Southern Weekend*. This demonstrates that it is not very sensitive to official voices.

### **5.2.3 Public involvement**

#### **(21) Behaviour change**

In terms of the dimension of public involvement, compared to the storyline 'awareness', 'behaviour' shows an attitude towards lifestyle changes identified in the coverage. As changing public behaviour is seen as a means of improving existing social systems, the storyline is categorised into the EM discourse.

'it's great to see that hundreds of millions of people share this common value of lowering our carbon footprint' (see 'Cities worldwide unplug for Earth Hour', *China Daily*, 29/03/2010)

As the quotation above demonstrates, the World Wide Fund for Nature (WWF) was cited in the coverage supporting a reduction in carbon footprint and lifestyle changes. The storyline was constructed to encourage people to change their behaviour and lifestyles in a green and sustainable way.

The storyline 'behaviour' could be constructed in 2007 and 2009 and declined in 2015 in the climate change coverage of *People's Daily* and *China Daily*. The decline is mainly because of the rise of the storyline 'participation' which refers to broad participation of various actors such as non-governmental organisations and academia.

#### **5.2.4 Science and ecology**

##### **(22) Surviving**

The storyline 'surviving' relates to ideas about urgent and serious impacts over society, security and survival. Compared to the storyline 'ecology' which refers to the concern about the environment and ecology, 'surviving' shows a primary concern about a serious threat to national and social security and human and species survival.

The State Council was cited in the coverage making the below statement in recognition of the urgency of addressing climate change and a threat to human survival. This means that the view on the urgency of the crisis had discursively been constructed as the Chinese governmental position in coverage. This storyline was constructed to extend the negative impacts and concerns from environmental and ecological dimensions to social and economic fields.

'Climate change is a global challenge involving national welfare and influencing global economic development and human survival (气候变化是一个全球性挑战，攸关各国国计民生，影响世界经济发展和人类生存)' (see 'the summit on energy security and climate change of major economies was held' '经济大国能源安全和气候变化论坛领导人会议举行', *People's Daily*, 10/07/2009)

Also, this storyline involves species survival in the constructed discourse. As the quotation below demonstrates, the storyline 'surviving' was linked to the China Three Gorges Corporation (CTGC) being identified to establish a link between the risk of the extinction of the wild Chinese sturgeon and the negative effects of climate change in the coverage.

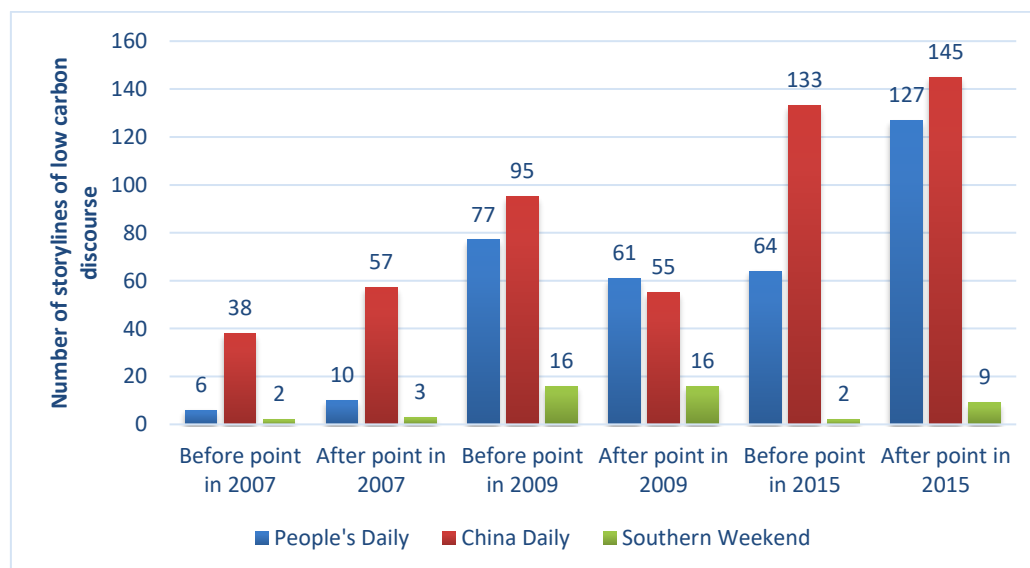
'The main cause of the loss of natural reproduction of the wild Chinese sturgeon is global climate change (致使野生中华鲟无自然产卵的主要因素是全球气候变暖的大环境)' (See 'three decades, three generations, no stop over the risk of extinction of the Chinese sturgeon recognised as a national treasure' '三十年，三代人，护不住长江“国宝”中华鲟无后', *Southern Weekend*, 20/03/2015)

The CTGC is a state-owned company of operating the Three Gorges project. It is very interesting to discover that this company was cited to attribute the risk of the extinction to the serious consequence of climate change rather than its local dam construction projects. *Southern Weekend* provides a discursive platform for the company to respond to criticism over its projects. This demonstrates that the paper constructs various voices in the climate coverage.

The storyline ‘surviving’ was growing particularly in 2009 in *People’s Daily* because Chinese governmental leaders frequently emphasised the urgency and survival caused by climate change issues in their speeches. This reflects that *People’s Daily* represents the official voices. However, the storyline had prevailed over time in *China Daily*. This demonstrates that *China Daily* provided a broader discursive space for raising the urgency of climate change even prior to Chinese governmental discursive focus on this storyline. *Southern Weekend* constructs its difference to *People’s Daily* witnessing the gradual growth of the storyline in its coverage.

### 5.3 The emergence of low carbon discourse

The year 2015 witnessed a dramatic discursive shift to the notion of low carbon in terms of climate change issues in the constructed discourse. As discussed in Chapter 4, my research labels a set of storylines about positive attitudes towards addressing climate change as low carbon discourse.



**Figure 5. 3 Trends in low carbon discourse across the critical points**

**Table 5. 4 Frequency of storylines of low carbon discourse**

Storylines	Year	People's Daily		China Daily		Southern Weekend	
		Frequency	%	Frequency	%	Frequency	%
(23) Economic opportunity	2007	11	2.9%	48	7.4%	1	2.0%
	2009	72	8.4%	50	7.1%	5	4.0%
	2015	34	10.3%	73	16.6%	1	3.0%
(24) Low carbon energy	2007	0	0%	1	0.2%	0	0%
	2009	5	0.6%	5	0.7%	2	1.6%
	2015	31	9.4%	45	10.2%	3	9.1%
(25) Market	2007	1	0.3%	1	0.2%	1	2.0%
	2009	0	0%	3	0.4%	3	2.3%
	2015	18	5.5%	8	1.8%	0	0%
(26) Transparency	2007	0	0%	1	0.2%	0	0%
	2009	4	0.5%	3	0.4%	2	1.6%
	2015	0	0%	1	0.2%	2	6.1%
(27) Participation	2007	1	0.3%	15	2.3%	1	2.0%
	2009	16	1.9%	15	2.1%	0	0%
	2015	8	2.4%	16	3.6%	1	3.0%
(28) Resilience	2007	0	0%	0	0%	0	0%
	2009	4	0.5%	1	0.1%	3	2.3%
	2015	15	4.5%	11	2.5%	1	3.0%
(29) Local	2007	2	0.5%	3	0.5%	0	0%
	2009	0	0%	2	0.3%	1	0.8%
	2015	8	2.4%	5	1.1%	1	3.0%
(30) China resp	2007	0	0%	9	1.4%	1	2.0%
	2009	5	0.6%	23	3.3%	6	4.7%
	2015	32	9.7%	34	7.7%	0	0%
(31) Developing resp	2007	0	0%	1	0.2%	1	2.0%
	2009	14	1.6%	5	0.7%	1	0.8%
	2015	6	1.8%	3	0.7%	2	6.1%
(32) Major emitters	2007	1	0.3%	16	2.5%	0	0%
	2009	18	2.1%	43	6.1%	9	7.0%
	2015	39	11.8%	82	18.6%	0	0%

According to Figure 5.3 and Table 5.4, *People's Daily* constructs its discourse with strong consistency with changes in policy rhetoric. As the Chinese government held positive attitudes towards a low carbon path, *People's Daily* constructed a consistent discursive path identified in 2015. *China Daily* constructed its climate discourse on the basis of a broader discursive space for constructed low carbon storylines even in 2007. On the one hand, it reflects the nature of official newspaper with the growth of the low carbon discourse over time. On the other hand, it reflects various storylines beyond governmental voices as the low carbon discourse can be identified in 2007. *Southern Weekend* shows a weak sensitivity to policy rhetoric even in terms of low carbon discourse. The constructed low carbon discourse declined even in 2015. Compared to the frequency of storylines in the discourses development and EM

(see Figure 5.1 and 5.2), the low carbon discourse was not constructed to be high in the coverage of *Southern Weekend*.

### **5.3.1 Economy**

#### **(23) Economic opportunity**

The storyline 'economic opportunity' refers to a reinterpretation of addressing climate change into business opportunity and economic investments. As the quotation below demonstrates, former US President Bill Clinton was cited as a news source for emphasising a close link between economic, job and business opportunities and addressing climate change.

'They're going to save money, make money, create jobs and have a tremendous collective impact on climate change all at once' (see 'Clinton program to give city skylines a green makeover', *China Daily*, 17/05/2007)

The storyline 'economic opportunity' prevailed over time in the constructed climate change discourse in *China Daily*. Particularly, *China Daily* did provide a discursive platform for a substantial discussion on low carbon economy even in 2007 (see Table 5.4). *People's Daily* constructed a rapid growth of the storyline in 2009. This demonstrates that the official mouthpiece discursively constructed a link between low carbon economy and addressing climate change even in 2009. *Southern Weekend* paid its attention to this storyline in 2009.

### **5.3.2 Energy and emissions**

Compared to the discourses 'development' and 'ecological modernisation', the notion of low carbon shows a more positive position in emissions reduction. The category of energy and emissions covers the following storylines about low carbon energy system, carbon market and the transparency of measuring, reporting and verifying action on addressing climate change. The emergence of these storylines reflects the rise of a proactive approach in the constructed climate change discourse of China.

#### **(24) Low carbon energy**

The storyline 'low carbon energy' involves reaching a carbon peak and controlling coal consumption. An official of the German Environment Agency (UBA) was cited in the coverage with the below statement expressing an idea to control the use of coal when discussing the Paris Climate Change Agreement.

‘Reducing the dependence on the use of coal and oil is beneficial to urban environment and public health (减少对煤炭和石油的依赖，有助于改善城市环境和公众健康)’ (see ‘China’s contribution to the Paris Agreement is indispensable’ ‘中国为《巴黎协定》达成作出不可替代贡献’, *People’s Daily*, 15/12/2015)

In the constructed discourse, controlling coal consumption can be identified as a milestone of action on addressing climate change in China. This is because China was identified as a large coal consumer. This is very different to the storylines ‘energy consumption’ and ‘energy mix’ under the development discourse, which are not discursively involved in controlling the consumption of coal recognised as the dirtiest energy.

Another important element of this storyline is about China’s promise to reach the peak of carbon emissions by 2030. The promise shows a fundamental difference to those storylines under the development discourse particularly like ‘no cap’ which refers to discursive resistance to a cap on carbon emissions. This storyline is also different to the storyline ‘carbon intensity’ categorised in the discourse ‘ecological modernisation’ which does not involve a promise to reach the peak.

As shown in Table 5.4, the storyline ‘low carbon energy’ increased from a marginal idea to an important statement in 2015 particularly in *People’s Daily* and *China Daily*. Also, the development of low carbon energy had been discursively revealed in the Chinese governmental position in 2015. This reveals similarities between the policy rhetoric and constructed climate change discourse in newspapers in China.

## **(25) Market**

The storyline ‘market’ focuses on initiating the carbon market in which carbon emissions can be set with a cap and their allowances can be purchased and sold.

‘Foreign direct investments in carbon trading will enhance the capital flow of the carbon market, improve price signals and encourage entrepreneurs to reduce emissions (境外投资者直接参与碳交易，有利于增强碳市场流动性，有利于碳市场发现和释放价格信号，引导企业积极节能减碳)’(see ‘Hubei plays a leading role in carbon trade’ ‘碳交易，湖北如何当上领头羊’, *People’s Daily*, 05/12/2015)

As the quotation above shows, an official from Hubei Province was cited as an actor in the coverage expressing a very positive attitude towards the establishment of carbon market. This is opposed to the storyline 'no cap' under the development discourse that the carbon trading system is not acceptable. Also, the storyline 'market' refers to a market-based system for setting a domestic cap on emissions while 'economic tools' categorised in the ecological modernisation discourse, as classified in my work, are utilised for improving and transforming economic and industrial structures without an absolute limitation on carbon.

The rise of the idea for a national carbon market means the decline in resistance to the carbon cap and trading system. Therefore, in 2015, having been linked with key governmental actors, the rise of the storyline reflects a positive attitude towards emission reduction constructed in the climate change coverage of China. As a national carbon market was placed on Chinese political agenda, the storyline was constructed growing dramatically in *People's Daily*. Compared to the mouthpiece, *China Daily* constructed a gradual increase in this storyline. However, *Southern Weekend* is not sensitive to this storyline in 2015.

## **(26) Transparency**

The storyline 'transparency' refers to a statement that action on emission reduction should be measurable, reportable and verifiable (MRV), in accordance with the UNFCCC. China utilises this principle to call for developed countries to play a leading role in reducing emissions.

The constructed discourse shows that the storyline had been very weak in the coverage across the three newspapers. It could be identified in 2007 in *China Daily* which constructed an early discussion on the transparency issue. In 2009, the storyline was slightly increasing in *China Daily* and *People's Daily*. This is because transparency of reporting and measuring emissions was discussed around the Copenhagen conference. *Southern Weekend* showed its difference to other newspapers with the absence of the storyline in 2007 and 2009.

In 2015, the storyline was clarified in the Chinese submission of Intended Nationally Determined Contributions (INDCs) to the UNFCCC emphasising the importance of creating statistical and accounting system of emissions. However, the storyline was not clearly identified in the constructed climate change



discourse in 2015 (see Table 5.4). Indeed, this does not mean that transparency was not recognised as an important statement in the coverage. As the storyline 'no target' disappeared, the constructed discourse shows a decrease in resistance to the measurable target of emission reduction.

### **5.3.3 Public involvement**

#### **(27) Participation**

The storyline 'participation' focuses on a wide public involvement including the role of various non-state actors in addressing climate change.

'efforts from businesses and NGOs are also important for addressing climate change' (see 'Climate summit "a new starting point"', *China Daily*, 01/12/2015)

The above statement was identified to be made by Chinese President Xi in the coverage demonstrating that the Chinese government recognised the important role of non-state actors in addressing climate change issues. In this sense, public participation involves various stakeholders including individuals, non-governmental organisations, academic institutions and business actors. More importantly, this storyline emerged as the political atmosphere of China shifted to a negative attitude towards non-government organisations. This demonstrates that the Chinese newspapers, acting in an authoritarian system, were identified to report the activities of NGOs within the fields of the environment and climate change.

*People's Daily* constructed the growing storyline in its coverage while *China Daily* emphasised the importance of public participation in a stable way. *Southern Weekend* constructed low attention to this storyline.

### **5.3.4 Science and ecology**

#### **(28) Resilience**

The storyline 'resilience' refers to an idea for raising general capability of resilience to climate change via the construction of facilities and infrastructure such as electricity supply, public transportation and energy stability. Compared to the storyline 'adaptation' which focuses on utilising existing resources to adapt to climate change, 'resilience' refers to developing new abilities and general solutions to climate threat (Wong-Parodi et al., 2015 pp. 1-2). The rise of the storyline 'resilience' shows the importance of facilities and infrastructure

in addressing climate change in the constructed discourse. While 'adaptation' simply focuses on environmental and ecological solutions to natural disasters, the storyline 'resilience' has specific and novel ideas of political, economic, social and cultural response to climate change such as 'sponge city'. Sponge city is an idea of facilitating urban resilience to climate change through managing and reusing rainwater (Liu, 2016).

As the quotation below demonstrates, Jim Yong Kim, the World Bank Group President (WB) was cited to establish a clear link between constructing infrastructure and addressing climate change in the constructed discourse.

'We estimate that the world needs an additional \$1 to 1.5 trillion dollars every year to be invested in infrastructure - roads, bridges, railways, airports, and energy plants. By 2030, we will most likely also need 40 percent more energy and face a 40 percent shortfall of water - pressures that may well be further accelerated by climate change' (see 'World Bank ready to share experience with China-proposed AIIB', *China Daily*, 08/04/2015)

*People's Daily* and *China Daily* constructed a dramatical growth of the storyline in the coverage. In 2015, as resilience was rising on China's political agenda, *People's Daily*, being a mouthpiece, paid more attention to the storyline than *China Daily*.

## **(29) Local implementation**

The storyline 'local' reflects a transition from national affairs to local implementation in terms of climate change issues.

'We at the local level have the responsibility, the power and the opportunity to take very bold and creative initiatives' (see 'Xi sees great promise for local ties', *China Daily*, 24/09/2015)

California Governor Jerry Brown was linked to the above statement when attending a meeting with Chinese President Xi calling for local communities to take the responsibility for addressing climate change. The constructed discourse shows that communication and cooperation at the local levels between the US and China could be identified as key to the implementation of climate change policies. The coverage recognised that the policies can be implemented effectively only when they are rooted in the ground at the local level. For this reason, the rise of the storyline reflects remarkable progress in

addressing the issues with a shift from national resolution to local implementation identified in the constructed discourse.

In 2007, while the storyline 'local' was very weak, it could be identified in *People's Daily* and *China Daily*. The storyline has increased but it has not received substantial attention from these two national official newspapers. However, *Southern Weekend*, being nationally-circulated but based in Guangdong Province, constructed very weak attention to concern about local implementation of climate policy. This demonstrates that climate change issues remained considered at national level in the coverage even in 2015.

### **5.3.5 Responsibility**

The category of responsibility under the low carbon discourse is because these storylines emphasise the key role of developing countries and emerging economies such as China and India in addressing climate change. The climate coverage constructed the emergence of positive attitudes towards mitigating climate change in China.

#### **(30) China's responsibility**

The storyline 'China resp' refers to a statement that China should take the responsibility for addressing climate change.

'The world appears to be unsure about whether China is serious about cutting emissions and achieving a good post-Kyoto deal' (See 'Wen off to Copenhagen as summit heats up', *China Daily*, 16/12/2009)

As the above quotation shows, the Environmental Defense (ED) recognised as an environmental NGO of the US was cited in the coverage expressing the concern about China's action on reducing emissions. In 2007, this type of critical view on China is very rare in *People's Daily* but it is not unusual to be identified in *China Daily*. In 2009, a small number of the storyline could be identified in *People's Daily*. This reflects that *People's Daily* constructs official voices and does not provide a platform for calling China to undertake responsibility. However, *China Daily* constructed its broader discursive space for discussing the role of China in addressing climate change. This paper has a much higher frequency of the storyline identified in the coverage than *People's Daily*. Even in *Southern Weekend*, the storyline could be identified in 2009 (see Table 5.4).

In addition to the criticism, positive suggestions can be found in the coverage and categorised into the storyline. In April 2010 in *China Daily*, the Huazhong University of Science and Technology (HUST) was cited as a news source for supporting a proactive role of China in undertaking the responsibility for addressing climate change.

In 2015, with Chinese governmental discursive change towards low carbon path, the storyline had increased dramatically in the coverage in *People's Daily* and *China Daily*. Compared to the official newspapers, *Southern Weekend* was not sensitive to this governmental discursive change (see Table 5.4).

### **(31) The responsibility of developing countries**

The storyline 'developing resp' refers to a statement that developing countries should take the responsibility for addressing climate change. It was even a popular storyline particularly linked to some key governmental actors such as the Chinese Central government and NDRC in 2009 in *People's Daily*. This is because these governmental actors were cited as news sources for emphasising the responsibility of developing countries prior to the Copenhagen conference. While the storyline was identified in *People's Daily*, *China Daily* and *Southern Weekend* had not constructed the storyline substantially in the climate coverage (see Table 5.4).

The constructed discourse reveals that developing countries, particularly emerging economies, should take the responsibility for addressing climate change as they increased the levels of carbon emissions dramatically. However, it is worth noting that the rise of the storyline does not mean that the constructed discourse suggests that developed countries can shirk their responsibilities and obligations.

### **(32) Major emitters**

The storyline 'major emitters' refers to an idea that major emitters and emerging economies should take collective action on addressing climate change. It reflects an emergence of reinterpretation of the different responsibilities between developed and developing countries. Emerging economies such as China and India were discursively constructed to take action on substantial emissions reduction as they are recognised as the major emitters of

greenhouse gases. China and the US were interpreted as two main contributors to climate change in the coverage.

‘while China and the United States are the two biggest contributors to climate change, other developing countries also play a big role, such as Brazil, India and South Africa’ (see ‘French President’s two-pronged mission’, *China Daily*, 18/09/2015)

The above statement was linked to the Environmental Defense (ED) showing the key role of major emitters of greenhouse gases in addressing climate change revealed in the coverage. In this sense, the constructed discourse suggests that the major emitters should play a leading role in emission reduction.

*People’s Daily* constructed its discursive change in accordance with official positions of China. In 2015, the storyline ‘major emitters’ increased dramatically in *People’s Daily*. This increase is relevant to the climate cooperation between President Xi and President Obama. Compared to *People’s Daily*, *China Daily* constructed its broader space for discussing the role of major emitters and economies even in 2007. On the other hand, the dramatical increase in the storyline in 2015 demonstrates that *China Daily* is also sensitive to governmental discursive change. *Southern Weekend* did not pay attention this storyline even in 2015 when the Chinese government held a positive attitude towards low carbon path. This demonstrates that *Southern Weekend* was not sensitive to governmental positions being different to the two national official papers.

## 5.4 Summary

The dynamic constructed climate change discourse shows that the storyline about development had increased in 2007 and 2009 but decreased in 2015 across the newspapers. The storylines ‘ecology’ and ‘scientific certainty’ had been well-identified across the three newspapers particularly in 2007 and 2009. However, *China Daily* and *Southern Weekend* provide a discursive space for the storyline ‘uncertainty’. This supports the expectation that they can provide a broader range of discussions on climate change. In 2007, the storylines ‘different resp’ and ‘developed resp’ clearly were constructed as China’s insistence on the existing international climate change institution and the principle of common but differentiated responsibilities identified in the coverage.

The year 2009 witnessed a discursive transition from development to ecological modernisation identified in the constructed discourse. On the one hand, the dynamic constructed discourse shows that the notion of ecological modernisation addressed the economic concern with an idea to transform the existing systems and utilise economic tools and policies. On the other hand, it constructed the urgency of ecological and environmental crises. The EM discourse could be identified and constructed as peaking in *People's Daily*. However, *China Daily* could construct the prevalence of this discourse even in 2007. This demonstrates that *China Daily* could provide broader discursive space than *People's Daily*.

In 2015, the constructed discourse of low carbon began emerging and growing with the rise of storylines 'economic opportunity', 'market', 'low carbon energy', 'resilience', 'participation' and 'major emitters' in the coverage. It is evident that the constructed climate discourse shifted from a priority of development to the low carbon economy. The storyline 'economic opportunity' could be identified in 2007 in *China Daily* and even in *People's Daily*. This demonstrates that climate change issues have been closely linked to economic considerations. Other storylines under this discourse were emerging dramatically in 2015 in *People's Daily*. However, *China Daily* could construct the discursive link between climate change and low carbon in 2009 and even in 2007. It constructs broader discursive space than *People's Daily*. While these two newspapers paid substantial attention to the low carbon discourse in 2015, *Southern Weekend* constructed a weak link to the discourse in its coverage. This reflects that *Southern Weekend* is a highly-marketised newspaper and it is thus very different to the official newspapers in terms of climate change coverage.

Drawing on the main findings of dynamic constructed climate change discourses and their storylines, Chapter 6 will look at the different features of representing various actors linked to the storylines in the climate change coverage in the three newspapers. Chapter 7 will analyse the key statements of three policy documents, employ discourse network analysis to understand how storylines and various actors are linked, and discuss the dominant constructed discourses and discourse networks in the three newspapers in China.

## Chapter 6: Various actors cited in the climate change coverage

Drawing on Chapter 5, this chapter focuses on representing and discussing the various actors linked to the storylines and discourses constructed in the climate change coverage in *People's Daily*, *China Daily* and *Southern Weekend*. I categorise the various actors into central and ministerial governmental actors of China, international governmental organisations, international and regional organisations, business, Non-Governmental Organisations (NGOs), academia, foreign governments, Provincial/local actors of China, famous individuals and others. Section 6.1 discusses how different newspapers cite the various actors as news sources in the climate coverage. Section 6.2 discusses the frequency of citation of main actors in the coverage. Section 6.3 identifies the key actors from each categorisation, compares their representations across the three newspapers and discusses links to discourses summarised from their own climate-related documents to illuminate the socially constructed nature of the climate discourse networks of the newspapers.

### 6.1 Features of social actors cited in the three newspapers

#### 6.1.1 Actors cited in *People's Daily*

*People's Daily* cited national and ministerial governmental actors of China as main news sources in its climate coverage. This supports an assumption that *People's Daily* is the mouthpiece of the Party and Government constructing the climate discourse in line with official voices (see Table 6.1).

*People's Daily* cited a small number of actors as news sources in the coverage in 2007. For example, before the critical point in 2007, there was 28 actors identified in the coverage. This demonstrates that climate change issues had not been widely linked by the newspaper with various actors cited in coverage in 2007. However, *People's Daily* witnessed a growing number of actors cited in the coverage in 2009 and in 2015. This is due largely to the rising of climate change issues on the agenda of *People's Daily* and Chinese decision-makers (Tolan, 2007 pp. 4-6). Particularly after the critical point in 2009, various actors were cited in the coverage. This is because of intensive discussion on the 2009 Copenhagen Summit identified in the coverage.

**Table 6. 1 The number of actors cited in the climate change coverage in *People's Daily***

Critical points actors		2007 before	2007 after	2009 before	2009 after	2015 before	2015 after
Central and ministerial actors of China		6	12	12	13	6	7
International governmental organisations		5	4	11	6	3	4
International and regional organisations		1	1	4	2	1	1
Business	Chinese companies	-	-	-	3	2	1
	Foreign companies	2	2	2	2	1	2
NGOs	Chinese NGOs	-	1	3	1	1	3
	Foreign NGOs	-	3	2	2	3	6
Academic	Chinese academia	4	1	5	8	6	6
	Foreign academia	1	2	2	10	4	12
Foreign governments	National level	7	8	13	17	7	12
	Local /functional level	-	5	-	2	5	3
Provincial/local actors of China		-	2	1	3	5	4
Famous individuals		2	-	3	-	-	-
Others		-	-	1(political party)	1 (foreign media)	1	-

*People's Daily* also cite international governmental organisations, academia and foreign governments as the main news sources in the coverage (see Table 6.1). Firstly, climate change issues were seen as international affairs involving global governance. The United Nations and its relevant institutions such as the UNEP were cited heavily by journalists in the climate change coverage. The number of international governmental organisations reached a peak in 2009 and declined in 2015. This decline suggests that climate change issues received more attention from the national level than from the international level in the constructed discourse. Secondly, academic communities were seen as important actors substantially quoted as news sources even in 2007. This is mainly because academic actors were substantially cited as news sources for discussing scientific certainty and ecological effects of climate change in 2007 when the fourth IPCC report was released. Thirdly, foreign governments had been widely cited in the coverage of *People's Daily* perhaps because climate change had become an important topic during meetings between Chinese and



foreign political leaders. The foreign governments can be cited as those who share and/or support Chinese positions on climate change constructed in coverage. For example, as revealed in Chapter 5, the US was cited to be linked to the storyline 'no cap' refusing a carbon cap and trade approach which was doubted by the Chinese government in 2007. The EU was cited as a supporter for raising the responsibility of developed countries which was favoured by China.

Non-governmental organisations (NGOs) were represented as marginal voices constructed in the coverage in *People's Daily* (see Table 6.1). Arguably, this is mainly because *People's Daily* is a mouthpiece of the Party and the Central government. It could not provide a substantial space for the voices of NGOs. However, the number of NGOs had been growing in the coverage particularly in 2015. This is mainly because climate change is not a very sensitive political issue compared to others such as democratic transformation. Overall, though, it could give a limited space for NGOs involving discussions on climate change.

Business actors received little attention from *People's Daily*. Being an official mouthpiece, it could not give a substantial discursive space for business actors. These actors were cited to focus on economic opportunity, low carbon energy, technology and behaviour change. They did not substantially discuss scientific and ecological issues and climate change justice.

Provincial and local actors of China were cited as very weak voices in the climate change discourse in the coverage. This suggests that climate change issues remained framed at international and national levels even in the most significant newspaper of China. Their focus was constructed to have concerns about ecological consequences of climate change such as floods. However, the slight growing number of the sub-national actors demonstrates an increase in local attention to climate change issues, although it seems far behind other actors cited in the coverage.

### **6.1.2 Actors cited in *China Daily***

Compared to *People's Daily*, *China Daily* have cited various actors as news sources in the climate change coverage over time (see Table 6.2). Even in 2007, a large number of various actors can be identified in the coverage. For example, there were 96 actors identified in the coverage before the critical point

in 2007. This indicates that *China Daily* played a pioneering role in communicating and socially and discursively constructing climate change issues.

Similarly to *People's Daily*, *China Daily* cited national and ministerial governmental actors as main news sources in its coverage. As discussed in Chapter 2, this reflects that *China Daily* is a national official newspaper constructing the climate discourse around governmental voices.

**Table 6. 2 the number of actors cited in the climate change coverage in *China Daily***

Critical points Actors		2007 before	2007 after	2009 before	2009 after	2015 before	2015 after
Central and ministerial actors of China		8	10	14	9	10	6
International governmental organisations		7	9	6	6	8	5
International and regional organisations		4	5	3	2	7	4
Business	Chinese companies	2	2	7	8	6	7
	Foreign companies	19	24	20	13	3	18
NGOs	Chinese NGOs	2	-	3	4	2	2
	Foreign NGOs	10	11	10	9	7	13
Academic actors	Chinese academia	8	10	17	16	12	11
	Foreign academia	11	10	10	11	17	12
Foreign governments	National level	9	10	11	15	9	6
	Local /functional level	9	5	3	4	5	2
Provincial/local actors of China		4	3	2	2	3	-
Famous individuals		2	3	2	-	-	-
Others		1 (Chinese media)	5 1 (foreign media)	2	5 (Chinese media) 7 (foreign media)	1 (Chinese media) 1 (foreign media)	1 (Chinese media)

On the other hand, there were a wide range of social actors cited in the climate change coverage in *China Daily*. Obviously, *China Daily* cited a much larger number of the actors than *People's Daily*. As discussed in Chapter 2, the empirical data demonstrate that *China Daily* can provide a wider discursive space for citing various social actors particularly business actors and NGOs.

Being different to *People's Daily*, *China Daily* constructed a proactive attitude towards citing the voices of foreign companies (see Table 6.2). Due to it being a marketised paper, it is not surprising to see that *China Daily* has stable contacts with business actors. Also, as a newspaper written in English, it has greater opportunity for citing the voices of international companies. It can be found that the foreign companies were much more frequently cited as news sources in the coverage than Chinese companies. This is mainly because the foreign companies might have involved the process of socially constructing climate change issues outside China and they have been cited in the coverage much sooner than Chinese companies. For example, even in 2007, Siemens was cited as a supporter for changing its business and industrial style towards addressing climate change, and BP was cited as a source for favouring the economic opportunity provided by low carbon energy. In comparison with the foreign companies, Chinese companies received much less attention from *China Daily*. It is not to say that Chinese media intended to ignore the role of Chinese companies in communicating climate change issues. Rather, this might be because the domestic business actors were cited as a weak role in the climate coverage. For example, Donghai, a financial company, was identified as the first Chinese business actor advocating the low carbon economy in coverage in 2009. This indicates that Chinese companies were much later than the international business actors being linked to their economic interests constructed in the coverage.

*China Daily* also provides a wider space for constructing the voices of NGOs compared to *People's Daily*. Interestingly, the number of foreign NGOs was much higher than that of their Chinese counterparts. Firstly, the foreign NGOs include international environmental groups such as Greenpeace. They are cited to be very active discursively across the international media outlets and news agencies. As revealed in Chapter 2, *China Daily* can use the articles from its media partners such as Reuters. In this sense, these foreign actors can be cited in the coverage. While the news articles were produced by other news agencies and media partners, *China Daily* censored and filtered the news sources and topics in the coverage. Therefore, the consequence of selecting and filtering the foreign news articles still reflects the constructed climate change discourse of *China Daily*. Secondly, according to the Chinese political system and political

environment, there are limitations of the development of domestic grassroots NGOs in China. While the international environmental groups have developed globally, Chinese NGOs played a weak role in participating in social affairs in China. Thirdly, compared to the mature international NGOs, the Chinese counterparts fail to gain attention from media. As discussed in Chapter 2, international environmental NGOs organised workshops and seminars providing environmental information and knowledge to journalists in China.

*China Daily* cited a wider range of academic actors than *People's Daily*. This suggests that *China Daily* constructed various dimensions of climate change issues. The academic actors were linked to various issues including ecological concerns, economic considerations, energy systems and climate justice. While *People's Daily* focused on the cause and consequence of climate change citing natural scientists such as Chinese Academy of Sciences (CAS), *China Daily* discursively constructed climate issues as various political, economic and social considerations citing social scientific actors such as Renmin University (Renmin) and Peking University (Peking).

Being similar to *People's Daily*, *China Daily* cited international organisations and foreign governments widely in the coverage. However, it is worth noting that local actors in foreign countries and China appeared to decline in the coverage over time. This might be because low carbon solutions and global collective action had been dominant in the coverage in 2015 while local actors were mainly concerned about the direct ecological effects. This demonstrates that *China Daily* discursively constructed climate change issues beyond sub-national levels.

### **6.1.3 Actors cited in *Southern Weekend***

*Southern Weekend* cited a much smaller number of actors as news sources in the climate change coverage (see Table 3). This is because *Southern Weekend* is a weekly printed newspaper. The year 2009 witnessed a peak in the number of actors cited in the coverage. A growing number of actors can be identified after the critical points in 2009 and in 2015. This is due to intensive coverage around the 2009 Copenhagen Summit and the 2015 Paris Summit. It is worth noting that the weekly paper had cited 15 actors even before the critical point in 2007. This demonstrates that *Southern Weekend* can construct various voices

for climate change issues prior to the official announcement of the first climate change objective.

Being different to *People's Daily* and *China Daily*, *Southern Weekend* does not cite central and ministerial governmental actors as main news sources in its coverage. This is as expected given that it is a highly-marketised paper which does not necessarily construct the climate discourse in line with official voices.

**Table 6. 3 the number of actors cited in the climate change coverage in *Southern Weekend***

Critical points		2007 before	2007 after	2009 before	2009 after	2015 before	2015 after
Newspapers							
Central and ministerial actors of China		2	3	3	3	0	1
International governmental organisations		2	-	1	1	-	2
International and regional organisations		-	-	-	1	-	-
Business	Chinese companies	-	-	2	1	2	-
	Foreign companies	1	-	1	-	-	-
NGOs	Chinese NGOs	-	-	-	2	-	1
	Foreign NGOs	-	1	3	4	-	-
Academic actors	Chinese academia	4	2	3	7	1	3
	Foreign academia	4	-	2	6	-	8
Foreign governments	National level	-	1	3	6	-	3
	Local/functional level	-	-	-	1	-	-
Provincial/local actors of China		1	-	1	1	-	-
Famous individuals		1	-	1	-	-	-
Others		-	-	-	-	-	-

Compared to *People's Daily*, *Southern Weekend* did not widely cite international organisations and foreign governments as main news sources. Firstly, *Southern Weekend* is a highly-marketised newspaper and it thus does not have to represent the international organisations and foreign governments in the coverage. Secondly, it is a paper circulated nationally but it is not produced as a national official paper. It is issued in Guangdong Province while *People's Daily* and *China Daily* are based in Beijing at central level. Therefore, it has less direct contacts with foreign and international governmental levels.

Academic actors were main news sources for climate change coverage in *Southern Weekend*. NGOs and business actors can be found in the coverage. But, they were cited frequently in 2009. In 2015, while various actors were

widely cited in the coverage in *People's Daily* and particularly in *China Daily*, they, except academia, were not substantially reflected in *Southern Weekend*. Even in 2015, *Southern Weekend* did not pay more attention to citing various actors for supporting the shifts in Chinese positions.

It is worth noting that local actors of foreign countries and China were represented as very weak voices even in *Southern Weekend* which is based at a provincial level. Therefore, this demonstrates that sub-national actors had received little attention from newspapers in China. Future research should clarify whether the newspapers pay little attention to local effects of climate change or local actors have not yet fully recognised the issues.

## **6.2 Main actors frequently cited in the coverage**

Following demonstrating the number of different types of actors across the critical points, this section explains the frequency of the main actors cited in the coverage. The main actors here are defined as those who are the most frequent news sources cited in the coverage.

I identified the six periods of time for observing dynamic climate change discourses in the coverage. Each period is the six months before or after a critical point. Appendix B shows the frequency of citation of the main actors in the coverage across the six periods.

### **6.2.1. International governmental organisations**

The international governmental organisations are the main actors frequently cited in the coverage. The United Nations and its relevant organisations and institutions have been cited as main news sources in the coverage. The international organisations include IPCC, UNFCCC, UNEP, UNDP, the World Bank (WB), the International Renewable Energy Agency (IRENA), the World Meteorological Organisation (WMO) and the UN Food and Agriculture Organisation (UNFAO). They are identified as the frequent news sources represented in the climate coverage in China and they involve the environment, development, climate change, food and agriculture, renewable energy and meteorological affairs.

However, this does not mean that these international organisations could be represented as part of the same discursive network. For example, while UNEP and UNDP were linked to the importance of social and economic development

of developing countries, the World Bank was cited as being supportive of a low carbon economy and action.

Appendix B shows these organisations are stable news sources for *People's Daily* and *China Daily*. They even could be found in *Southern Weekend*. Obviously, *China Daily* provides a broader discursive space for citing these international organisations. This is particularly the case for the UN and UNEP. My work finds that official newspapers of China cite the international governmental organisations particularly the UN subordinate bodies as news sources stably and frequently across the periods.

### **6.2.2 International and regional organisations**

Compared to international governmental organisations, other international and regional institutions had been cited less frequently in the coverage. The most frequently cited actor in this category is the International Energy Agency (IEA) because energy issues are closely linked to addressing climate change. The World Economic Forum (WEF) had been frequently cited in *China Daily* as climate issues had been reframed as economic considerations. The African Development Bank (ADB) and the African Union (AU) had been cited within two periods respectively because the African countries are constructed as being vulnerable to the consequence of climate change. They also can be used for supporting Chinese positions on economic development, poverty, and historical responsibility.

The less frequent citing of organisations in *People's Daily* might be because the mouthpiece can provide discursive space for citing governmental voices and even international governmental organisations more than other actors. However, compared to *People's Daily*, *China Daily* cited IEA and WEF as news sources in the coverage more frequently. Firstly, this contrast supports an expectation that *China Daily* can provide a wider range of social actors cited in the coverage. Secondly, *China Daily* cited these organisations because it has linked climate change issues with various storylines concerning energy and economic opportunity. In contrast to *People's Daily* and *China Daily*, *Southern Weekend* has not adequate resources to access to these international organisations in the climate change coverage because it is not a national official paper. Also, it might be because these actors are cited in other news topics but they have not yet been linked to climate change issues in *Southern Weekend*.

### **6.2.3 Business actors**

Obviously, business actors played a very weak role and were cited rarely in the climate coverage in *People's Daily* (see Table 6.1). However, in *China Daily*, while a big number of Chinese and foreign companies are identified, there is lack of specific business actors frequently and consistently cited as news sources in the coverage. This suggests that a wide range of business actors can be cited as news sources but no single company is a dominant news source in the climate change coverage in China.

The Chinese business actors cited include the state-owned companies like the State Grid Corporation of China (SGCC) related to energy issues and electricity supplies, the successful private companies like the Vanke Group, and coal industry like Shenhua Group (SG).

The foreign companies appear to be more frequently cited in the coverage than the Chinese business actors. This is due to the nature of *China Daily* having more scope for selecting various voices and having access to foreign media partners. The foreign companies were widely linked to industrial transformation, behaviour change and low carbon economy. While Shell and BP are very famous fossil fuels companies, they have even been cited as supporters for industrial upgrade, low carbon economy and green lifestyle in the coverage.

### **6.2.4 Non-Governmental Organisations (NGOs)**

Chinese NGOs can be identified in coverage but they were not frequently cited as news sources. Firstly, the development of these NGOs is limited by the political system and environment of China. Secondly, while climate change issues remain at national and international level, these NGOs focus on local environmental issues such as water quality and air pollution.

It is very surprising to find that foreign NGOs can be cited frequently in the coverage of China particularly in *China Daily*. WWF, Greenpeace, Environmental Defense Fund (ED) and Oxfam have been very frequently quoted in the coverage across the three years particularly in *China Daily*. This confirms the discussion in Chapter 2 that NGOs can be cited as stable news sources in the climate coverage in China. As Chinese journalists lack of professional knowledge of climate change, they may seek to acquire climate-related information from international NGOs. Particularly in 2007, while the Chinese governmental actors raised economic development as their political



priority, these NGOs were cited as an important role in raising the awareness of climate change on the media's agenda (Geall and Hu, 2011 p. 13).

#### **6.2.5 Academic actors**

In contrast to Chinese business actors and NGOs being cited as weak voices in the coverage, Chinese experts and academic communities have been cited as news sources very frequently across the three newspapers. First of all, climate change involves scientific research and discovery. This indicates that climate change experts can be cited as news sources for communicating relevant scientific knowledge. The Chinese Academy of Sciences (CAS) and Tsinghua University both are leading academic actors conducting research on natural sciences and engineering in China. Secondly, the academic actors not only involve scientific discussions but also they are engaged in political, economic and social affairs in terms of climate change issues. The Chinese Academy of Social Sciences (CASS), Peking University and Renmin University are leading academic institutions conducting research on social sciences. Thirdly, these academic actors can be cited frequently in the coverage mainly because their experts have stable contacts with journalists. For example, Pan Jiahua is a professor from the CASS being cited as news sources very intensively and frequently in the climate coverage in China. Fourthly, these academic actors, particularly like Tsinghua and CASS, are members of Chinese delegation to international climate change negotiations (Hart et al., 2014 p. 13). Therefore, Chinese academic communities were cited as one of main news sources in the climate coverage in China.

A large number of foreign academic actors were cited in the coverage. For example, after the critical point in 2009, there were 10 actors identified in *People's Daily*, 11 in *China Daily* and 6 in *Southern Weekend*. However, there were few of them becoming stable news sources. Firstly, this is mainly because foreign academic actors, unlike their Chinese counterparts, lack substantial influence over policy-makers. Chinese academic institutions are state-owned and controlled, and the key experts can be climate change policy-advisors and negotiators. However, the foreign academic institutions are much more independent from governmental intervention than the Chinese counterparts. In this sense, foreign academic actors might have less potential for gaining attention from media. Secondly, Chinese journalists appear to find it very

difficult to contact foreign experts. Foreign companies such as Siemens and International NGOs such as Greenpeace set up their offices in China having access to Chinese journalists. However, foreign universities and the experts lack this access. Thirdly, academic communities across the world have a consensus on general scientific understanding of climate change (Wübbeke, 2013). Therefore, as Chinese scientists could be cited as news sources, journalists did not have to cite foreign experts. Also, due to lack of being cited as stable news sources, as clarified in Chapter 4, my work does not conduct a case study of foreign academic actors.

#### **6.2.6 Foreign governmental actors**

Foreign governments are cited to be one of dominant news sources in the climate change coverage. Climate change issues are framed at national and international levels. The newspapers can report that their governmental leaders discussed climate issues with their Chinese counterparts. This, to some extent, contributes to the frequent citations of foreign governmental actors in the newspapers in China.

Among the top ten foreign governmental actors frequently cited in the coverage across the six periods, there are six developed countries/regions (the US, the EU, Germany, France, the UK and Japan) and four developing countries (India, Indonesia, Brazil and South Africa). Obviously, developed countries were cited very frequently in the coverage. The most frequent news source is the US being regularly cited across the six periods in *People's Daily* and *China Daily*. Not surprisingly, the US was the largest greenhouse gases emitter and even boycotted the Kyoto Protocol. During the leadership of the Obama Administration, the US changed its attitudes towards addressing climate change in a very positive way. Therefore, the US can be the most important foreign governmental actor cited in the coverage. Following the US, the European countries and Japan have been frequently cited. This is mainly because they played a leading role in global climate change governance. On the one hand, they called for major emitters to take substantial action on mitigation. On the other hand, they were cited as supporters for emphasising the key role of developed countries in addressing climate change in the coverage. India is identified to be the most frequent developing country cited in *People's Daily*. This is mainly because Indian positions on economic priority and historical

responsibilities can be used to construct Chinese stances on different responsibilities for climate issues. Indonesia and Brazil are the frequent foreign governmental actors cited in the coverage mainly because they both were linked to the key role of deforestation and carbon sinks in addressing climate change.

### **6.2.7 Local actors**

There were weak voices from local governments of foreign countries and China cited and identified in the coverage. This demonstrates that climate change remains at national and international levels. California is identified as a local governmental actor of the US quite frequently cited in the coverage. This is mainly because California was cited to play a leading role in mitigating emissions at sub-national level in the US and it was cited to be engaged in enhancing the cooperation over green economy, energy and technologies between the US and China.

Similarly, Chinese local actors were rarely cited in climate change coverage. These actors were linked to local ecological concerns in the constructed discourse. For example, even in 2007, in the coverage, the Beijing government was cited to express the negative effects of climate change on the 2008 Beijing Olympics Games.

The weak voices of local actors represented in the coverage can be explained by *People's Daily* and *China Daily* featured as national central-level newspapers. However, it is worth noting that *Southern Weekend*, being a highly-marketised paper circulated nationally and based at a provincial level, has not substantially cited local actors as news sources in the climate coverage. On the one hand, this might indicate that climate change issues have not been widely discussed at local levels, which are directly vulnerable to the effects of climate change. On the other hand, future research should look at how local and provincial newspapers discursively construct climate change issues.

### **6.2.8 Famous individuals**

Some famous individuals were cited frequently in the climate coverage in China. Al Gore, the Former Vice President of the US, has been cited to be engaged in raising the public awareness of climate change. Professor Nicholas Stern linked climate change to economics in the constructed climate discourse. Tony Blair,

the former Prime Minister of the UK, was cited to help construct awareness of the low carbon path. Compared to international governmental organisations, governmental levels and academic communities, famous individuals are not seen as frequent news sources and routines. However, it is very impressive that these celebrities could be utilised with their political and social power for raising public awareness of environmental protection in the constructed discourse and thus become news sources in the climate change coverage in China. Because of a low number of the famous individuals identified in the coverage, my work does not conduct a case study of this categorisation.

### **6.3 Dynamic constructed climate change discourses in the coverage and their documents of key actors**

Drawing on the identification of the key actors in Chapter 4 and above discussion, this section focuses on observing how these actors have been cited and linked to the constructed climate change discourses over time across the three newspapers. Section 6.3.1 focuses on the links between the Chinese governmental actors and storylines constructed and identified in the three newspapers. Other sections compare the storylines linked to actors between their actual documents and the constructed discourse in the coverage. Also, this chapter shows the frequency of each storyline of the key actors cited and identified in the coverage of the three newspapers.

#### **6.3.1 Main national and ministerial governmental actors**

As identified in Chapter 1, there are key governmental actors involved in climate change governance of China. Table 6.4 shows the frequency of storylines linked to the key governmental actors cited in the coverage. *People's Daily* constructs a much larger discursive space for citing the key governmental actors particularly the Chinese Central Government and the State Council compared to *China Daily*. However, *Southern Weekend* constructs a weak link to citing the governmental actors. Particularly, the Chinese Central Government (CC gov) and the State Council could not be identified being cited in the coverage. In line with my expectations, this demonstrates that *Southern Weekend* is not sensitive to political voices as it is a highly-marketised paper.

In *People's Daily* and *China Daily*, the top Chinese political leaders (CC gov and State Council), the NDRC and the MoFA were cited as key news sources in the

climate coverage. The MoST was cited less frequently in the constructed discourse particularly in 2015. This demonstrates that the technological concerns had been reinterpreted in the coverage as other topics such as low carbon energy and the responsibilities of developed countries for providing technological assistance. The MEP was rarely cited in climate change coverage. The CMA was cited less frequently in the coverage. This is because the CMA was frequently cited as news sources showing the scientific certainty and reality of and ecological effects of climate change constructed in the coverage. With the growth of public awareness and governmental recognition of climate change, the CMA was no longer cited as a main news source in the coverage.

**Table 6. 4 Frequency of storylines linked to key national and ministerial governmental actors in the coverage**

Actors	Discourses	People's Daily			China Daily			Southern Weekend		
		2007	2009	2015	2007	2009	2015	2007	2009	2015
CC gov	Development	36	51	18	13	6	5	-	-	-
	EM	8	22	3	1	3	1	-	-	-
	Low carbon	-	9	15	-	2	6	-	-	-
State Council	Development	38	89	20	11	37	4	-	-	-
	EM	6	47	11	1	8	10	-	-	-
	Low carbon	2	30	28	-	4	21	-	-	-
NDRC	Development	22	49	5	22	37	3	1	3	-
	EM	4	9	2	6	7	1	-	1	-
	Low carbon	-	8	12	1	3	15	-	-	-
MoFA	Development	44	53	3	30	26	5	-	2	-
	EM	8	8	-	1	-	1	-	-	-
	Low carbon	-	7	1	1	2	6	-	1	-
MoST	Development	12	-	-	16	2	-	2	-	-
	EM	7	4	-	8	-	-	1	-	-
	Low carbon	1	2	-	2	-	1	-	-	-
MEP	Development	2	1	-	6	-	4	-	-	-
	EM	-	4	-	1	-	-	-	-	-
	Low carbon	-	3	1	2	1	-	-	-	-
CMA	Development	29	9	2	32	2	1	3	-	-
	EM	4	1	-	4	-	4	-	-	-
	Low carbon	1	-	-	1	-	4	-	-	-

### 6.3.2 The United Nations (UN)

*The Annual Report of the UN Secretary General* shows that the UN focuses on defending climate justice for developing countries while it emphasised the urgency of climate change and raised positive attitudes towards low carbon path (see Table 6.5).

**Table 6. 5 The United Nations: Comparison between storylines of newspapers and statements of actual documents**

Year	Discourses	Actual Documents	People's Daily	China Daily	Southern Weekend
2007	Development	Development Scientific certainty Awareness Adaptation Different resp	Development (2) Energy mix Research Scientific certainty (2) Developed resp Different resp(3) US resp	-	-
	EM	Economic tools Transformation Surviving	Economic tools (2) Surviving (5)	Surviving (2)	-
	Low carbon	-	Economic opportunity	Major emitters (2)	-
2009	Development	Development Adaptation Different resp	Development (3) Different resp (3) Developed resp (8) No cap	Developed resp US resp	-
	EM	Surviving	Economic tools Transformation Surviving (3)	Carbon intensity Surviving (4)	Surviving
	Low carbon	Economic opportunity Resilience Major emitters	Economic opportunity Participation China resp Developing resp	Low carbon energy China resp	-
2015	Development	Development	Developed resp	Developed resp	-
	EM	Surviving	Transformation (2)	Transformation (2) Surviving (3)	-
	Low carbon	Participation	Low carbon energy resilience China resp (5) Major emitters Developing resp (2)	Participation China resp (3) Developing resp Major emitters	-

*People's Daily* almost constructed the UN's positions as close to UN's own. In the constructed climate discourses in 2007, the UN was linked to the discourse 'development' because it was cited as a supporter for helping developing countries and ensuring the principle of common but differentiated responsibilities (see Table 6.5). Also, it was cited for criticising the developed countries particularly the US for their weak action on mitigation in *People's Daily*. In 2015, the dramatic shift in positions reflects that the UN was linked to the responsibilities of developing countries, major emitters and economies and particularly China. In *People's Daily*, the UN was not cited as a critical actor for

the Chinese government but it was represented as a supporter for China to play a leading role in global climate governance. For example, the UN was cited as a news source for encouraging China to provide more financial support for other developing countries through South-South cooperation.

However, in *China Daily*, the UN was not linked to the development discourse even in 2007. It appeared to emphasise the urgency of climate change and the collective action of major emitters in the constructed discourse in 2007. Although the UN was linked to the development discourse in 2009 and in 2015, it was represented as an actor calling for developed countries and the US to take substantial action. This suggests that *China Daily* did not have to represent the UN as a supporter of Chinese official positions. Also, this reflects that *China Daily* does not necessarily share same position with *People's Daily*.

### 6.3.3 The International Energy Agency (IEA)

*The World Energy Outlook Reports* show that the IEA emphasised the responsibility of industrialised nations and interests of developing countries and it recognised the reality and urgency of climate change issues. It also focused on transforming energy system and utilising clean technology.

**Table 6. 6 IEA: Comparison between storylines of newspapers and statements of actual documents**

Year	Discourses	Actual Documents	People's Daily	China Daily	Southern Weekend
2007	Development	Development Energy consumption Energy mix Scientific certainty	-	Energy mix	-
	EM	Technology Surviving	-	-	-
	Low carbon	Major emitters	-	-	-
2009	Development	Development Developed resp Different resp	-	Energy mix (2) Energy consumption No target	-
	EM	Transformation Surviving	-	-	Surviving
	Low carbon	Economic opportunity	Economic opportunity	Economic opportunity (2)	-
2015	Development	-	-	-	-
	EM	Transformation	-	-	-
	Low carbon	Low carbon energy Developing resp	Market Major emitters	Low carbon energy	-

As shown in Table 6.6, *People's Daily* did not pay much attention to IEA in the climate coverage. This might be because the IEA is not an international governmental organisation and China is not a member of it. Being a mouthpiece, *People's Daily* therefore did not give much space for citing this actor. However, *China Daily* cited the IEA as a news source around the three policy moments and linked it to the development discourse particularly expressing the continuity of using fossil fuels. It also linked the IEA to the low carbon economy in the constructed discourse. However, the newspapers did not cite the IEA's statements on 'development' and 'different responsibilities' in the coverage. This demonstrates that the IEA was mainly cited in order to construct energy and emissions issues in the coverage.

#### 6.3.4 The State Grid Corporation of China (SGCC)

The State Grid Corporation of China (SGCC) is a state-owned company engaged in supplying electricity and it heavily relies on energy consumption. Therefore, as shown in Table 6.7, the annual reports of this actor showed its focus on energy issues and industrial transformation in terms of climate change issues.

**Table 6. 7 SGCC: Comparison between storylines of newspapers and statements of actual documents**

Year	Discourses	Actual Documents	People's Daily	China Daily	Southern Weekend
2007	Development	Energy consumption Scientific certainty	-	-	-
	EM	-	-	-	-
	Low carbon	-	-	-	-
2009	Development	Energy mix	-	Energy mix	-
	EM	Transformation	-	Transformation Carbon intensity	-
	Low carbon	Economic opportunity	-	-	-
2015	Development	-	-	-	-
	EM	-	-	-	-
	Low carbon	Low carbon energy Resilience Market	Low carbon energy	Low carbon energy	-

However, it has been barely cited in the coverage. *China Daily* cited the SGCC as a supporter for transforming the electricity system and achieving a low carbon energy system. On the one hand, this demonstrates that this state-owned company had not been cited as news sources substantially in the climate coverage. On the other hand, its key interests and concerns have been



constructed and identified in the coverage such as ‘energy mix’ and ‘low carbon energy’.

### 6.3.5 Siemens

Siemens is a large international company involved in the technology and engineering industry. It appears to be promoting its green business strategy. *The 2007 Annual Report of Siemens* showed its emphasis on energy conservation and the utilisation of advanced technology. In 2009 and 2015, Siemens emphasised industrial transformation and the low carbon economy revealed in its reports.

**Table 6. 8 Siemens: Comparison between storylines of newspapers and statements of actual documents**

Year	Discourses	Actual Documents	People’s Daily	China Daily	Southern Weekend
2007	Development	Energy consumption Research	-	Development Energy mix Energy consumption	-
	EM	Technology	-	Technology (2) Transformation (2)	-
	Low carbon	-	-	Economic opportunity	-
2009	Development	-	-	-	-
	EM	Transformation Technology	Transformation	-	-
	Low carbon	Participation	Economic opportunity	-	-
2015	Development	Developed resp	-	-	-
	EM	Transformation	-	-	-
	Low carbon	Economic opportunity	-	-	-

As illuminated in Table 6.8, *People’s Daily* and *China Daily*, to some extent, draw on the voices of Siemens in their climate coverage. For example, in *People’s Daily* in 2009, Siemens was cited as a news source for supporting Chinese energy-saving markets emphasising huge economic opportunities and industrial transformation. This green strategy was constructed to match the Chinese governmental position in conserving energy and reducing emissions. In *China Daily* in 2007, Siemens was even cited as an actor defending the importance of economic growth and the heavy dependence on coal consumption. In order to ensure the markets in China, foreign business actors can be cited to be consistent with governmental positions.

### 6.3.6 The Friends of Nature (FoN)

The Friends of Nature (FoN) is an environmental NGO of China. According to Table 6.9, it had been engaged in raising the importance of changing lifestyles and behaviour and public participation in addressing climate change. The FoN has been rarely cited in climate coverage in China. It was not identified in *China Daily*. This indicates that it receives weak attention from newspapers in China. The FoN was surprisingly identified in the coverage in *People's Daily*. It was cited as an actor encouraging lifestyle changes before the 2015 Paris Climate Change Summit when the Chinese government held a proactive attitude towards reaching a global agreement. *Southern Weekend* cited the FoN as a news source. This indicates, once more, that *Southern Weekend* could cite a broader range of various social actors compared to the official newspapers.

**Table 6. 9 FoN: Comparison between storylines of newspapers and statements of actual documents**

Year	Discourses	Actual Documents	People's Daily	China Daily	Southern Weekend
2007	Development	Diplomacy	-	-	-
	EM	-	-	-	-
	Low carbon	-	-	-	-
2009	Development	-	-	-	-
	EM	Behaviour	-	-	Surviving (2) Behaviour
	Low carbon	Participation	-	-	-
2015	Development	-	-	-	-
	EM	Behaviour	Behaviour	-	-
	Low carbon	Participation	-	-	-

### 6.3.7 Greenpeace

As discussed in Chapter 2, Greenpeace is an international environmental organisation successfully gaining attention from media. As shown in Table 6.10, Greenpeace raised the importance of the low carbon energy system and pathway and emphasised the responsibilities of developed countries. It showed a very proactive attitude towards addressing climate change and reducing emissions.

Being different to the Chinese environmental organisations, Greenpeace has been cited explicitly in *China Daily*. This demonstrates that *China Daily* can cite a wider range of actors than *People's Daily*. Also, this shows, as discussed in

Chapter 2, that the international NGOs have been cited as important news sources by Chinese journalists than their Chinese counterparts.

**Table 6. 10 Greenpeace: Comparison between storylines of newspapers and statements of actual documents**

Year	Discourses	Actual Documents	People's Daily	China Daily	Southern Weekend
2007	Development	Carbon sinks Research Developed resp	-	Energy mix Ecology (2) Scientific certainty Developed resp	Ecology
	EM	Surviving	-	Technology Surviving	-
	Low carbon	Low carbon energy	-	-	-
2009	Development	Developed resp US resp	-	Developed resp US resp (3)	Different resp
	EM	-	-	Transformation Carbon intensity (2) Surviving	Technology
	Low carbon	Low carbon energy	-	Major emitters	-
2015	Development	-	-	Developed resp	-
	EM	-	-	Technology Surviving	-
	Low carbon	Low carbon energy Participation	China resp	Market Major emitters China resp (2)	-

The coverage in *China Daily* could construct the basic positions of Greenpeace in the coverage particularly citing it as a news source for raising ecological and scientific concerns and emphasising the responsibility of developed countries. Greenpeace was also linked to ecological concerns and scientific certainty raising China as a victim of climate change in the coverage. However, it was not cited as an actor calling China to take substantial action on reducing emissions and controlling coal consumption in the constructed discourse. Even in 2009, Greenpeace was cited as a news source requiring developed countries including the US to take substantial action. In 2015, its discursive shift to low carbon discourse was constructed and identified in the coverage. This is because Greenpeace was cited to stress the importance of the cooperation between China and the US ('major emitters') and the leading role of China in the Paris conference (China resp). This is not to say that Greenpeace shares similar ideas with the Chinese governmental positions. On the one hand, this might be because Greenpeace has to ensure its expression is politically

‘correct’ and safe in China. On the other hand, it could be filtered by journalists to be cited for strengthening and legitimating Chinese governmental stances.

### 6.3.8 The Chinese Academy of Social Sciences (CASS)

The CASS was not only an academic body for conducting social scientific research but also it was labelled as an official think tank. Therefore, it was involved in raising policy options for decision-making system. According to Table 6.11, the basic positions of the CASS showed an obvious change from an emphasis on development discourse in 2007 to a support for low carbon path in 2015. This demonstrates that Chinese academic communities and think tanks had gradually adjusted their ideas for policy options.

**Table 6. 11 CASS: Comparison between storylines of newspapers and statements of actual documents**

Year	Discourses	Actual Documents	People’s Daily	China Daily	Southern Weekend
2007	Development	Development No cap Scientific certainty	-	Development Awareness Developed resp	Research Developed resp
	EM	-	Behaviour (2)	Behaviour	-
	Low carbon	-	-	-	-
2009	Development	-	Development (7) Carbon sink Energy mix (4) Energy consumption Diplomacy (2) Different resp (2) Developed resp (4)	Development (3) Developed resp (2) Different resp Diplomacy US resp (2)	Scientific certainty
	EM	Transformation Carbon intensity	Economic tools (4) Transformation (3) Carbon intensity (2) Behaviour (4) Surviving (2)	Transformation (2) Technology Behaviour Surviving	-
	Low carbon	China resp	Major emitters (5)	Participation Major emitters (3)	-
2015	Development	Developed resp	-	-	-
	EM	-	Surviving Technology Behaviour	-	-
	Low carbon	Economic opportunity Developing resp	Low carbon energy	-	-

In the constructed discourse, the CASS is identified as an actor having a high number of statements in the coverage particularly of *People’s Daily* in 2009.

This is mainly because there were two special interviews with Pan Jiahua, an expert on climate economics and policy from the CASS. It was cited as an actor strongly defending the fundamental national interests of economic development and historical responsibilities. In 2009, while the CASS was widely linked to the EM discourse such as industrial transformation, it was weakly linked to the low carbon discourse. This could be because the CASS was a substantially cited a news source defending the fundamental interests of China.

### 6.3.9 Tsinghua University

As shown in Table 6.12, *the Annual Reports on Low Carbon Development* show that Tsinghua University reflects a focus on proactive action on transforming industrial structure and achieving a low carbon path. In the constructed discourse, Tsinghua University was not strongly linked to a focus on the development discourse.

**Table 6. 12 Tsinghua: Comparison between storylines of newspapers and statements of actual documents**

Year	Discourses	Actual Documents	People's Daily	China Daily	Southern Weekend
2007	Development	-	-	-	-
	EM	-	-	-	-
	Low carbon	-	-	Economic opportunity	-
2009	Development	-	Development (2) Energy consumption Energy mix No target Developed resp (2)	Developed resp	-
	EM	Economic tools Transformation Carbon intensity	Transformation (2) Surviving Behaviour (2)	Technology (2) Transformation Carbon intensity (4)	-
	Low carbon	-	Economic Opportunity (3) Low carbon energy Participation Developing resp	Economic opportunity (2) Low carbon energy Local Market China resp Major emitters	Economic opportunity (2)
2015	Development	-	-	Development	-
	EM	-	-	-	Surviving
	Low carbon	Economic opportunity Low carbon energy	-	Low carbon energy (2) China resp	-

While Tsinghua University was reported as having emphasised economic development and historical responsibility, it was widely linked to economic opportunity, low carbon energy and the responsibility of China and major emitters particularly in *China Daily*. This might be because Tsinghua University is a top academic institution conducting research on natural sciences and engineering. *People's Daily* cited this actor as a news source being linked to the development discourse and for defending fundamental interests of China particularly in 2009. Again, this reflects that *People's Daily* strongly constructs the climate discourse in line with the official positions.

#### **6.3.10 the United States**

The US showed a dramatic discursive change in its climate change positions (see Table 6.13). The US Presidential speeches revealed a proactive shift towards addressing climate change from Bush to Obama. In 2007, President Bush did not show a strong willingness to undertake the responsibility for addressing climate change. He emphasised that major emitters and emerging economies including China and India should share the responsibilities with industrialised nations. However, in 2009 and particularly in 2015, President Obama raised the key role of the developed countries and the US in leading the global low carbon transformation.

The Chinese newspapers could construct the discursive change of the US in the coverage. In 2007, the US was cited as a strong opponent of curbing carbon emissions and limiting economic growth. These constructed statements were consistent with Chinese governmental positions. In 2009 and particularly in 2015, the US was cited as a strong supporter for addressing climate change by seeing it as an economic opportunity and raising the importance of a low carbon energy system. The US was clearly linked to the low carbon discourse because of its frequent emphasises on the importance of the cooperation between the US and China namely two biggest greenhouse gases emitters (storyline 'major emitters') in the constructed discourse.

The discursive change of the US can be constructed in the coverage primarily because of the evolution of the Chinese constructed climate discourse. Firstly, as discussed in Chapter 5, the US and Chinese governmental actors could be linked to the same set of storylines such as 'no cap' and 'no target'. This can be

used to construct stories which strengthen Chinese legitimacy within the dominant constructed development discourse. Secondly, as the rise of the storyline ‘major emitters’ indicates, China and the US had achieved a series of climate cooperation since President Xi has taken office clarified in the constructed discourse.

**Table 6. 13 US: Comparison between storylines of newspapers and statements of actual documents**

<b>Year</b>	<b>Discourses</b>	<b>Actual Documents</b>	<b>People’s Daily</b>	<b>China Daily</b>	<b>Southern Weekend</b>
<b>2007</b>	<b>Development</b>	Energy consumption Adaptation	Development Energy mix No cap (2)	No cap (2) No target (2) Scientific certainty	-
	<b>EM</b>	Technology	Technology	Technology (3)	-
	<b>Low carbon</b>	Major emitters	Major emitters	Major emitters (4)	-
<b>2009</b>	<b>Development</b>	Development Developed resp US resp	Developed resp	Development Energy mix No cap (2) Scientific certainty (2) Developed resp (3) US resp	-
	<b>EM</b>	Economic tools Surviving	Economic tools Technology (5)	Economic tools Transformation (3) Technology (5) Surviving (3)	Technology
	<b>Low carbon</b>	Major emitters	Economic opportunity (5) Transparency Major emitters	Economic opportunity (3) Transparency Developing resp Major emitters (11)	Low carbon energy Transparency Major emitters (2)
<b>2015</b>	<b>Development</b>	US resp	-	Scientific certainty Different resp	-
	<b>EM</b>	Surviving	Transformation	Surviving (7)	-
	<b>Low carbon</b>	Economic opportunity Low carbon energy Transparency	Economic opportunity (2) Low carbon energy Major emitters (6)	Economic opportunity (10) Low carbon energy (3) Participation Resilience Major emitters (20)	Low carbon energy Developing resp

### 6.3.11 the European Union

The EU could be labelled as a proactive actor for addressing climate change. It not only emphasised industrial transformation, Emissions and Trading Scheme and low carbon economy but also it raised the importance of global climate justice particularly the responsibilities of developed countries (see Table 6.14).

**Table 6. 14 EU: Comparison between storylines of newspapers and statements of actual documents**

Year	Discourses	Actual Documents	People's Daily	China Daily	Southern Weekend
2007	Development	Scientific certainty Carbon sinks Adaptation Developed resp Different resp	Development No target Different resp (2)	Energy mix Ecology Scientific certainty Developed resp (2) US resp (2)	-
	EM	Economic tools Transformation Technology Surviving	Transformation	Economic tools (2) Technology (2) Carbon intensity	-
	Low carbon	Economic opportunity Market Developing resp Major emitters	-	Economic opportunity (3) Participation China resp	-
2009	Development	Developed resp US resp	Awareness Developed resp	Scientific certainty Developed resp (3)	No cap Developed resp US resp (2)
	EM	-	Technology (2)	Economic tools Technology (3) Transformation (2) Surviving (2)	Transformation Surviving
	Low carbon	Developing resp Major emitters	Major emitters	China resp (3)	China resp Major emitters (2)
2015	Development	Adaptation Developed resp	-	Energy mix Different resp (2)	-
	EM	-	-	Technology	-
	Low carbon	Transparency Participation	-	Low carbon energy Major emitters (2)	-

However, the EU appeared to be cited as an actor widely linked to the development discourse in the coverage (see Table 6.14). This is in contrast to the leadership of the EU in global climate change governance. This contrast is because the EU was cited in the coverage calling for developed countries to play a leading role in addressing climate change and helping developing countries. Also, it was cited for supporting the existing international climate change frameworks particularly the principle of common but differentiated responsibilities. These selected statements can be used to construct Chinese stances on different historical responsibilities in climate coverage. Therefore, the EU was widely linked to the statements of the development discourse. Compared to *People's Daily*, *China Daily* linked a much wider range of storylines to the EU in the coverage. Even in *Southern Weekend* in 2009, the EU could be cited and identified clearly in the coverage. This demonstrates that



the EU has been a very important news source in the climate coverage in China. However, the EU was also linked to the EM discourse raising the importance of technology and transformation and the low carbon discourse calling China and major emitters and economies to take substantial action on emissions reduction. This demonstrates that the policy rhetoric of the EU can be cited and well-identified in the climate change coverage of China particularly in *China Daily*.

### 6.3.12 India

As shown in Table 6.15, Indian Prime Minister Singh raised a strong position on the priority of the development discourse in 2007 and 2009. In 2009, Singh deliver a message of the priority of economic development and poverty eradication in India in terms of climate change issues. This message could be understood as a response to the rise of international criticism and pressure on major developing countries such as China and India.

**Table 6. 15 India: Comparison between storylines of newspapers and statements of actual documents**

Year	Discourses	Actual Documents	People's Daily	China Daily	Southern Weekend
2007	Development	Energy mix Energy consumption Adaptation Research	-	-	Developed resp
	EM	Economic tools	-	-	-
	Low carbon	-	-	-	-
2009	Development	Development	Development (2) Research (2) Developed resp (3) Different resp (5)	Development (3) Developed resp Different resp (2)	-
	EM	-	Economic tools Technology	Transformation Surviving	-
	Low carbon	-	-	China resp Developing resp (2)	-
2015	Development	Development Energy mix Developed resp Different resp	Developed resp (3) Different resp	-	-
	EM	-	Surviving	-	-
	Low carbon	Low carbon energy	-	-	-

Chinese newspapers could clearly construct the storylines of India around its positions. Particularly in 2009, around the Copenhagen conference, China and

India were cited to share a similar climate change position forming the BASIC coalition in the coverage. BASIC countries - Brazil, South Africa, India and China - have a common position in competing with other groups in the international climate change negotiations. In this sense, India was cited as a strong supporter for the development discourse in the coverage. It was still linked to economic priority and different responsibilities between developed and developing countries even in 2015.

### 6.3.13 California

California can be identified as a pioneering actor of implementing climate policy at a local level. This can be demonstrated by its proactive statements on low carbon path in *the Annual Climate Action Team Report* (see Table 6.16).

**Table 6. 16 California: Comparison between storylines of newspapers and statements of actual documents**

Year	Discourses	Actual Documents	People's Daily	China Daily	Southern Weekend
2007	Development	-	US resp	-	-
	EM	-	-	-	-
	Low carbon	Local Participation	-	-	-
2009	Development	-	-	-	-
	EM	Surviving	-	-	-
	Low carbon	Economic opportunities Resilience	-	-	-
2015	Development	-	-	-	-
	EM	Economic tools	Transformation	Transformation	-
	Low carbon	Resilience	Major emitters (2)	Economic opportunity Local Participation China resp	-

In 2007 and 2009, statements from California were rarely cited and identified in the coverage. In 2015, the rise of California represented in *People's Daily* and *China Daily* is mainly because close cooperation between local governments of China and California in terms of addressing climate change. As discussed in Section 6.1.3, *Southern Weekend* could not construct a discursive space for citing local actors of foreign countries because it did not have access to the news sources.

In the constructed discourse, California appeared to be mainly linked to transformation, local implementation, participation and economic opportunity

and the responsibility of China. California is a sub-national governmental actor of the US and it held a very positive attitude towards addressing climate change at a local level. Also, it was engaged in raising communication and cooperation with China. It is worth noting that California was one of only a few foreign local actors clearly cited and identified in the climate coverage in China.

## 6.4 Conclusion

This chapter discusses the representations of various social actors in the climate change coverage in *People's Daily*, *China Daily* and *Southern Weekend*. The findings show that *People's Daily* and *China Daily* could construct the voices of central and ministerial governmental bodies substantially in line with their statements and positions because they are labelled as national official newspapers. However, *Southern Weekend* is labelled as a highly-marketised newspaper and therefore it did not cite a wide range of governmental actors particularly the Chinese Central Government and the State Council as news sources.

*People's Daily* mainly cites international governmental organisations, academia and foreign governments as news sources in the climate change coverage. This supports the expectation that *People's Daily* is a mouthpiece of the Party and Government constructing governmental activities and topics at national and international levels in line with their positions.

*China Daily* cites a wide range of social actors including business and NGOs to construct climate discourse in coverage. This supports the expectation that *China Daily* is an official newspaper but it can provide a broader discursive space for citing various actors in the climate coverage.

*Southern Weekend* contrasts sharply to *People's Daily* and *China Daily*. It did not cite international organisations as its main news sources. Foreign governments were cited in the coverage mainly in 2009 due to the international attention to the Copenhagen summit. This reflects that *Southern Weekend* is not sensitive to governmental positions across domestic, international and foreign levels in the coverage.

The next chapter will analyse the main features of dynamic constructed discourse networks and dominant discourses and their links to climate policy rhetoric.

## **Chapter 7: Climate change discourse network analysis of newspapers in China in 2007, 2009 and 2015**

Drawing on Chapter 5 and 6, this chapter focuses on the dynamic constructed climate change discourse networks in China as observed across a wide range of storylines constructed in and actors cited in *People's Daily*, *China Daily* and *Southern Weekend*. In order to develop a better understanding of the constructed discourses, this chapter shows how various actors are cited to link to a set of storylines and form the constructed discourse networks. The main feature of this chapter is comparing the nature of the constructed climate change discourse networks across the three newspapers and around critical points.

Based on discussions on a social constructionist approach to environmental discourse (Chapter 3) and the methodology (Chapter 4), the discourse network analysis of climate coverage is conducted by borrowing key elements of the discourse approach developed by Hajer (1995 p. 65). The big difference to the Hajer's approach is that my work focuses on the discourse networks constructed by the newspapers. Firstly, a constructed discourse network is established on the basis of a discourse which contains a set of storylines constructed in the climate coverage. Secondly, it includes a group of actors cited to be linked to the storylines in the coverage. Thirdly, based on the research design of the present research, constructed dominant discourses are identified, which are linked to various actors and particularly governmental bodies in the constructed discourse networks. I call this constructed discursive institutionalisation because it is represented in the climate coverage rather than real political discourse.

As discussed in Chapter 1, this chapter identifies the three key governmental documents concerning climate change in China for explaining dynamic policy rhetoric. Following this, it discovers how various storylines are structurally constructed to be linked to various actors and particularly governmental bodies cited in the coverage. Also, as explained in Chapter 3, it analyses the extent to which storylines are widely linked to governmental actors in the constructed

climate discourse networks. Furthermore, this chapter compares the summarised key elements of policy documents to those identified storylines in the constructed climate change discourses. These comparisons can imply the extent to which policy rhetoric has been constructed in the climate change discourse networks across the three newspapers.

In order to better understand the constructed climate change discourse networks, this chapter visualises discourse networks with storylines and actors/claim-makers. In the constructed climate discourse networks, storylines and actors are marked with black squares and grey circles respectively (see Appendix D, E and F). Governmental actors are marked with purple triangles. In the diagrams showing the main constructed discourses and discourse networks, discourses are marked with black squares in a larger size. Using this way of visualising constructed discourse networks, this chapter can reflect how these storylines are structured in the constructed climate discourse networks, whether they are linked to governmental actors and the extent to which policy rhetoric is repeated in the constructed discourse networks of the newspapers.

## **7.1 Policy rhetoric of key documents at the critical points**

As explained in the Introduction, this PhD thesis selects three policy moments as the critical points for analysing dynamic constructed climate change discourses. The policy documents are *China's National Climate Change Programme*, the announcement of China's positions on the Copenhagen climate change conference, and the submission of the Intended Nationally Determined Contributions (INDCs) of China to the United Nations Framework Convention on Climate Change (UNFCCC).

### **7.1.1 Energy intensity target and National Climate Change Programme in 2007**

The National Development and Reform Commission (NDRC) released *China's National Climate Change Programme* on 4<sup>th</sup> June, 2007. This marked the first time when the Chinese government clarified its target of addressing climate change. The prominent element of this policy document is the energy intensity target that China would reduce 20% energy consumption per unit GDP at the level of 2005 by 2010.

The policy document also shows other objectives involving adaptation, research and public awareness. The objective of adaptation focuses on enhancing the capability of mitigating the effects of climate change over agricultural, natural, and ecological dimensions. Raising the level of research and development can be helpful to provide the scientific evidence of climate change and suggestions for addressing the issue. Public awareness of climate change should be strengthened through communicating scientific knowledge to people. These objectives can be categorised into the storylines 'adaptation', 'research' and 'awareness' respectively.

In addition to the objectives, there were guidelines and principles clarified in the Programme. The guidelines can be found below:

- 'To give full effect to the Scientific Approach of Development;
- To promote the construction of socialist harmonious society;
- To advance the fundamental national policy of resources conservation and environmental protection;
- To control GHG emission and enhance sustainable development capacity;
- To secure economic development;
- To conserve energy, to optimize energy structure, and to strengthen ecological preservation and construction;
- To rely on the advancement of science and technology;
- To enhance the capacity to address climate change (NDRC, 2007 p. 23)'

These guidelines can be categorised into seven main concerns and storylines, namely development, energy consumption, energy mix, technology, research, adaptation and ecology. The guidelines concerning 'the Scientific Approach of Development', 'the construction of socialist harmonious society', 'enhance(ing) sustainable development capacity' and 'secur(ing) economic development' mean that economic and social development is a significant consideration in addressing climate change and 'development' is thus seen as the dominant storyline in the policy document. The ideas concerning 'resources conservation and environmental protection' and 'ecological preservation and construction' reflect the environmental and ecological concerns of the Chinese government and demonstrate that the storyline 'ecology' can be identified in the climate policy rhetoric. Although the policy mentions 'control GHG emissions', it does

not mean that China would take substantial action on reducing emissions. This can be demonstrated by the guidelines concerning 'conserv(ing) energy' and 'optimiz(ing) energy structure' which focus on improving energy consumption rather than mitigating emissions intensity. They reflect the storylines 'energy consumption' and 'energy mix' in the policy. 'The advancement of science and technology' can be understood in relation to the perceived importance of developing and utilising technology as a means of addressing the issues, which reflects the storyline 'technology'. 'Enhancing the capacity to address' reflects China's resolution on adaptation to climate change.

These guidelines and objectives also reflected the principles of addressing climate change in the policy document, which can be found below:

'To address climate change within the framework of sustainable development.

To follow the principle of "common but differentiated responsibilities" of the UNFCCC.

To place equal emphasis on both mitigation and adaptation.

To integrate climate change policy with other interrelated policies.

To rely on the advancement and innovation of science and technology.

To participate in international cooperation actively and extensively (NDRC, 2007 pp. 24-25)'

As discussed in Chapter 5, 'the framework of sustainable development' should be categorised in the storyline 'development' as it does not show a positive attitude towards substantial action on mitigation. Also, the principles reflect the storylines 'adaptation' and 'technology'.

It is worth noting that the principle of 'common but differentiated responsibilities' clearly shows Chinese attitudes towards the responsibility for addressing climate change. This is a very fundamental principle insisted upon by China in terms of climate change issues, which can be categorised into the storyline 'different responsibilities'.

### **7.1.2 Carbon intensity target and the announcement of China's position in the Copenhagen climate change summit in 2009**

China's target of a dramatic reduction in carbon intensity and its positions in the Copenhagen climate change summit was announced by the State Council on 26<sup>th</sup> November, 2009 (NDRC, 2009).

As the quotation below demonstrates, the Chinese government announced its target of reducing emissions intensity by 2020.

'China is going to reduce the intensity of carbon dioxide emissions per unit of GDP in 2020 by 40 to 45 percent compared with the level of 2005'(NDRC, 2009).

While the energy intensity target is designed to reduce energy consumption per unit of GDP growth, the carbon intensity target announced prior to the Copenhagen Summit aims to reduce the ratio of the emissions of carbon dioxide to the level of economic growth. This demonstrates that the Chinese government clarified the specific 'carbon intensity' target in policy rhetoric.

'The government would devote major efforts to developing renewable and nuclear energies to ensure the consumption of non-fossil-fuel power accounted for 15 percent of the country's total primary energy consumption by 2020' (NDRC, 2009).

'More trees would be planted and the country's forest area would increase by 40 million hectares and forest volume by 1.3 billion cubic meters from the levels of 2005' (NDRC, 2009).

As the quotations above illuminate, the announcement includes the targets of improving the energy mix and raising forest coverage reflecting the storylines 'energy mix' and 'carbon sink'. These targets were more ambitious than those announced in 2007. Non-fossil-fuel energy was planned to increase from 10% to 15% of total energy consumption by 2020.

'The index of carbon dioxide emissions cuts, announced for the first time by China, would be "a binding goal" to be incorporated into China's medium and long-term national social and economic development plans.' (NDRC, 2009)

As the quotation above demonstrates, the 'binding goal' refers to the compulsory target in the five-year national economic plan. However, this does not mean that the Chinese government would agree with a legally-binding target in an international agreement. China insisted on taking voluntary action on achieving the target. Integrating curbing carbon emissions into national



development plans reflects China's resolution on economic and social transformation. This requires the process of changing economic and industrial structure, and reflects the importance of the storyline 'transformation' in the policy rhetoric.

'the UNFCCC and the Kyoto Protocol with the principle of common but differentiated responsibilities'(NDRC, 2009).

In terms of international agreements, as the quotation above demonstrates, the announcement reiterated the principle of 'common but differentiated responsibilities'. It implies that the UNFCCC and the Kyoto Protocol are important international institutional frameworks. This refers to an opposition to any proposals with an intention to revise and change the principles of the existing international protocols. This demonstrates that the storyline 'different responsibilities' remained a significant position of the Chinese government in 2009.

'Appropriate handling of the climate change issue is of vital interest to China's social and economic development and people's fundamental interests, as well as the welfare of all the people in the world and the world's long-term development' (NDRC, 2009).

'China faced mounting pressure and difficulties in developing its national economy and improving people's living standards as the country's industrialization and urbanization accelerated' (NDRC, 2009).

On the one hand, as the quotation above demonstrates, the Chinese government raised its concern about the negative effects of climate change over social and economic development and human society. It reflects the emergence of the storyline 'survival' in policy rhetoric. Also, 'appropriate handling of the climate change issue' reflects that the storyline 'adaptation' remained in the policy document.

On the other hand, the Chinese government delivers a clear message of the importance of development and the difficulty in addressing climate change in China. This reflects the fundamental governmental position in considering climate change issues, which can be categorised into the storyline 'development'.

'More funding would be invested into the research, development and industrialization of technologies for energy saving, and into energy

efficiency, clean coal development, renewable energies, advanced nuclear energies, and carbon capture and storage' (NDRC, 2009).

This statement shows an emphasis on the development of advanced technologies for addressing climate change, which is categorised into the storyline 'technology'. As the quotation above demonstrates, these technologies include nuclear energy, clean coal and carbon capture and storage (CCS). The reliance on technology is an important feature of the notion of ecological modernisation. Also, 'energy saving' and 'energy efficiency' reflects the importance of energy conservation and efficiency, which can be categorised into the storyline 'energy consumption'.

'Laws, regulations and standards would be formulated and fiscal, taxation, pricing and financial measures would be introduced to manage and monitor the implementation of those laws and regulations' (NDRC, 2009).

As the quotation above demonstrates, economic tools and policies play a vital role in assisting the implementation of those regulations and laws related to climate change. In this sense, adjusting existing institutional arrangements can be used for fixing the problems of climate change. This demonstrates that the storyline 'economic tools' was reflected in policy rhetoric in 2009.

'.....advocated greater public awareness in addressing global climate change and encouraged low-carbon lifestyles and consumption' (NDRC, 2009).

As the quotation above demonstrates, the announcement reiterates the importance of raising the public awareness of climate change which can be understood as the storyline 'awareness', and it states an emphasis on changes in public behaviour and lifestyle in a sustainable way which is categorised into the storyline 'behaviour'.

### **7.1.3 Carbon peak and the submission of Intended Nationally Determined Contributions (INDCs) of China in 2015**

China submitted the proposal of Intended Nationally Determined Contributions (INDCs) to the institution of the United Nations Framework Convention on Climate Change (UNFCCC) on 30<sup>th</sup> June, 2015. In this proposal, China made a commitment to achieve the target of reducing 60% to 65% of carbon intensity and reach a carbon peak by 2030. Compared to those policy documents with targets for energy intensity in 2007 and carbon intensity in 2009, the proposal of

INDCs suggests that the storyline 'low carbon energy' was clarified in the policy rhetoric in 2015.

In terms of the responsibility for addressing climate change, on the one hand, China insisted on the importance of the principles of equity and common but differentiated responsibilities which is categorised into the storyline 'different responsibilities', and it placed an emphasis on the leading role of developed countries in addressing climate change which is categorised into the storyline 'developed countries' responsibility'. On the other hand, China called for developing countries to undertake the responsibility with 'enhanced mitigation action' and to raise the level of transparency of the action (NDRC, 2015 pp. 17-19). This can be categorised in the storyline 'developing countries' responsibility'. Compared to the policies in 2007 and 2009, the submitted proposal indicates remarkable progress in addressing climate change. As the quotation below demonstrates, the proposal provides specific measures for tackling climate change.

'Implementing Proactive National Strategies on Climate Change;  
Improving Regional Strategies on Climate Change;  
Building Low-Carbon Energy System;  
Building Energy Efficient and Low-Carbon Industrial System;  
Controlling Emissions from Building and Transportation Sectors;  
Increasing Carbon Sinks;  
Promoting the Low-Carbon Way of Life;  
Enhancing Overall Climate Resilience;  
Innovating Low-Carbon Development Growth Pattern;  
Enhancing Support in terms of Science and Technology;  
Increasing Financial and Policy Support;  
Promoting Carbon Emission Trading Market;  
Improving Statistical and Accounting System for GHG Emissions;  
Broad Participation of Stakeholders;  
Promoting International Cooperation on Climate Change (NDRC, 2015 pp. 6-14)'

The proposal was, to some extent, established on the basis of previous policy rhetoric and climate discourses. 'Implementing proactive national strategies' does not only reflect China's proactive attitude towards addressing climate issues but also it shows the importance of implementing climate policies. China's resolution on implementing climate policies can be demonstrated by 'improving regional strategies' which indicates a shift from national plan to local implementation. This demonstrates that the storyline 'local' was identified in policy rhetoric.

The measure of 'building low carbon energy system' primarily focuses on controlling coal consumption reflecting remarkable progress in climate discourse. It is very surprising to witness a dramatic change in China's energy strategy from defending its heavy dependence on coal to controlling the consumption. 'Building low carbon energy system' reflects that the Chinese government specifies a close link between low carbon energy and addressing climate change, which is categorised in the storyline 'low carbon energy'.

The measures concerning 'low carbon industrial system', 'low carbon development growth' and 'financial support' suggest a considerable change in the climate discourse from economic priority to opportunity. Addressing climate change was seen as an opportunity for accelerating the development of the low carbon industrial system, and it was no longer considered a barrier to economic development. Instead, the notion of low carbon growth became an important idea in the policy rhetoric. This demonstrates that the storyline 'economic opportunity' was adopted in the policy document in 2015. Also, in contrast to discursive resistance to the idea of the carbon trading scheme, as witnessed in 2007, the 'carbon emission trading market' demonstrates significant progress in China's attitudes towards an opening of the carbon market, which can be categorised into the storyline 'market'.

The measure concerning 'building and transportation sectors' reflects the importance of industrial transformation and upgrade, which can be categorised in the storyline 'transformation'. The measures concerning 'carbon sinks', 'low carbon way of life' and 'science and technology' demonstrate that the storylines 'carbon sink', 'behaviour' and 'technology' remained in the policy rhetoric in 2015.

Compared to the storyline ‘adaptation’ with concerns about natural disasters and ‘surviving’ with worries about the risk of damaging ecological diversity and human society, an emphasis on ‘climate resilience’ in the policy document reflects a shift to the resolution over mitigating the negative effects of climate change on urban infrastructure and industrial systems, which is categorised into the storyline ‘resilience’.

In contrast to China’s resistance to the transparency of reviewing the implementation of reducing emissions due to a concern about national sovereignty in 2007 and 2009, the measure of improving the statistical and accounting system of emissions shows China’s effort to measure and assess action on addressing climate change. This demonstrates that the storyline ‘transparency’ could be identified in the policy rhetoric in 2015.

The measure of involving a wide range of stakeholders suggests an emphasis on the public participation of various actors including media and local communities in addressing climate change. In this sense, this measure is not only designed to raise the public awareness of the issues and encourage people to change their lifestyle but also it is introduced to encourage more public participation in addressing climate change which is categorised into the storyline ‘participation’.

Based on these measures, China showed a proactive attitude towards domestic governance of and international cooperation on climate change.

## **7.2 Climate change discourse network analysis of newspapers in 2007**

In the visualised climate change discourse networks, main discourses are marked with black squares in a larger size in the diagrams of discourse networks. An arrow indicates that an actor is selected as a news source by journalists being linked to a storyline and represented in a discourse.

### **7.2.1 *People’s Daily*: Constructed climate discourse network within the six months around the release of the 2007 National Climate Change Programme**

The main feature of the constructed climate discourse network in *People’s Daily* is that the constructed climate change discourse was centralised around

governmental actors cited in the coverage. Apparently, the key governmental actors (purple triangles) including the NDRC, the MoFA, the MoST and the State Council were cited to be linked to the storylines of the development discourse like ‘development’, ‘different resp’, ‘energy consumption’, ‘ecology’ etc before the critical point in 2007 (see Appendix D).

Similarly, those storylines structured around the key governmental actors remained cited and identified in the network after the release of *China’s National Climate Change Programme* on 4<sup>th</sup> June, 2007. An important feature of the network was the highly centralised discourse constructed around the key governmental bodies. This reflects the nature of *People’s Daily* which constructs the climate discourse in line with the governmental voice.

**Table 7. 1 Storylines and key policy elements around 4<sup>th</sup> June, 2007 in *People’s Daily***

<b>Dimension</b>	<b>Before the programme</b>	<b>The programme (4<sup>th</sup> June, 2007)</b>	<b>After the programme</b>
<b>Economy</b>	Development	Development	Development Economic opportunity
<b>Energy and emissions</b>	Carbon sink Energy consumption Energy mix Technology	Carbon sink Energy consumption Energy mix Technology	Carbon sink Energy consumption Energy mix Technology Transformation
<b>Public involvement</b>	Awareness	Awareness	Awareness Behaviour
<b>Science and ecology</b>	Adaptation Ecology Research	Adaptation Ecology Research	Adaptation Ecology Research Surviving
<b>Responsibility</b>	Different responsibilities	Different responsibilities	Different responsibilities Developed countries responsibilities

However, some new storylines are constructed and identified as entering the central place of the constructed discourse network after the critical point (see Table 7.1). The storylines ‘surviving’ and ‘transformation’ had been linked to governmental actors including the State Council, the Chinese Central

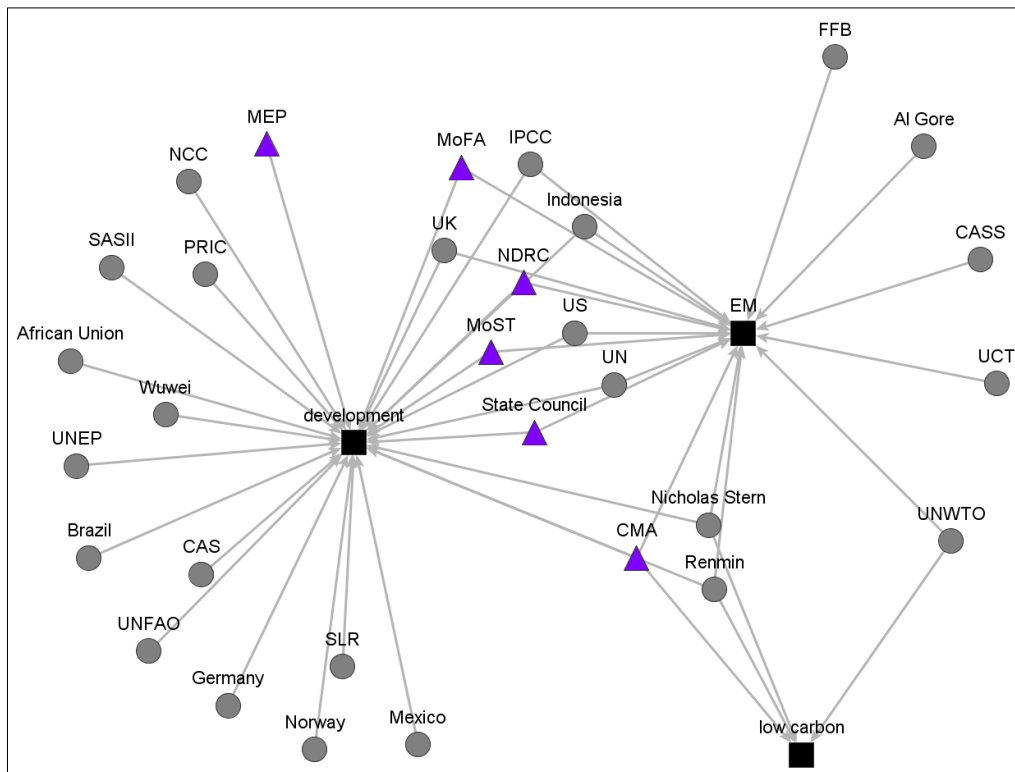
government (CC gov), MoST, CMA, and MoFA etc. Even in 2007, it is clear to see that climate change issues were discursively constructed as economic transformation and industrial upgrade (transformation), and an urgent threat to security, society and survival (surviving) and they were linked to the key governmental actors in the coverage in *People's Daily*. This demonstrates that the seriousness of climate change was constructed by *People's Daily* being identified in the coverage even in 2007.

Within the six months after the critical point, it is worth noting that there were barely any business actors except Nordex cited in *People's Daily*. Nordex was linked to those statements concerning technology and economic opportunity. As discussed in Chapter 6, this is as expected given that the paper is the mouthpiece of the Party and thus it is not a great platform for citing entrepreneurs as news sources in the coverage.

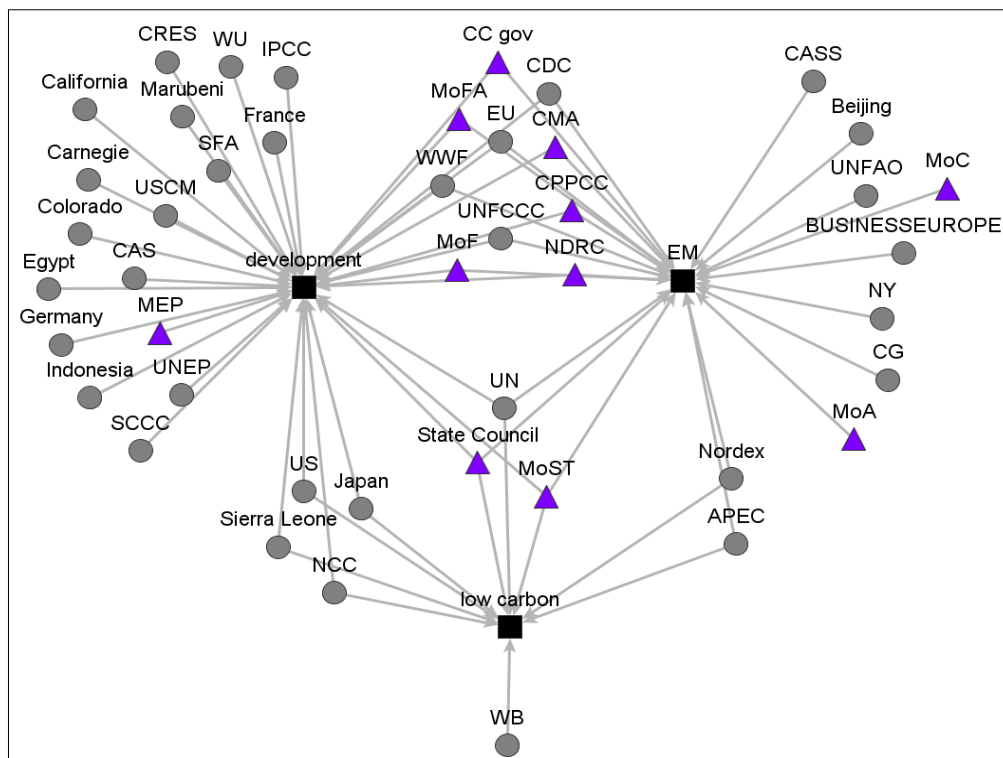
Due to the nature of *People's Daily*, the change in the constructed climate discourse networks around the critical point is not dramatic (see Table 7.1). The storylines centralised in the discourse networks in *People's Daily* were highly constructed in line with the policy rhetoric in 2007.

### **7.2.2 *People's Daily*: Dominant constructed discourse networks within the six months around the release of the 2007 National Climate Change Programme**

The common feature of the constructed discourse networks around the critical point in 2007 is that the development discourse was constructed and identified to be dominant in *People's Daily*. The discourse 'development' was clearly linked to the majority of actors (see Figure 7.1 and Figure 7.2). Also, it was widely linked to governmental actors cited in the coverage. The dominant discourse networks were constructed being linked to the priority of economic development, the importance of conserving energy and the concern about negative impacts caused by climate change. Similarly, the discourse 'ecological modernisation' (EM) was constructed being linked to a wide but smaller range of actors particularly including those important governmental bodies. This is because these governmental actors were linked to storylines 'tech', 'behaviour' and 'transformation' categorised into the discourse of ecological modernisation.



**Figure 7. 1** Main constructed climate discourses within the six months before 4<sup>th</sup> June, 2007 in *People's Daily*



**Figure 7.2** Main constructed climate discourses within the six months after 4<sup>th</sup> June, 2007 in *People's Daily*



However, this does not demonstrate that the notion of ecological modernisation can be constructed and identified as the dominant discourse. This is simply because those storylines such as 'behaviour' and 'transformation' were not widely linked to the majority of governmental actors before the critical point. Also, after the critical point, while 'transformation' was structured in a central position, the storylines 'behaviour' and 'economic tools' were linked to different actors in a very fragmented way. Therefore, the ecological modernisation discourse network was not constructed as the dominant one in the climate discourse of *People's Daily* in 2007.

Compared to 'development' and 'ecological modernisation (EM)', the discourse 'low carbon' was constructed and identified to be a marginal role in the networks (see Figure 7.1 and Figure 7.2). Firstly, the discourse of 'low carbon' was linked to the minority of actors. Secondly, it was not linked to a wide range of governmental actors. Before the critical point, the CMA was the only governmental actor identified in this constructed discourse network. CMA was cited in expressing its concern about the negative impact over economic activities caused by climate change to construct the development discourse. After the critical point, the storylines such as 'participation' and 'major emitters' under the low carbon discourse were identified as being very marginal in the constructed network. Therefore, the discourse network of low carbon was very marginal in the constructed discourse networks in *People's Daily* around the critical point in 2007.

It is important to note that the US and the UN were identified in the constructed networks showing their links to the low carbon discourse after the critical point. As revealed in Chapter 6, the UN was cited in raising the importance of the low carbon economy in the constructed discourse. However, the US was linked to the storyline 'major emitters' after the critical point. It was cited to emphasise the important role of major developing countries like China and India in reducing emissions. Therefore, while the US was linked to the constructed low carbon discourse network, it does not mean that *People's Daily* cited the US as a proactive actor of reducing emissions in the coverage in 2007.

### **7.2.3 *China Daily*: Constructed climate discourse network within the six months around the release of the 2007 National Climate Change Programme**

Before the critical point in 2007, the majority of storylines under the discourse of development were structured in the constructed network and were linked to key governmental actors in *China Daily*. However, a major difference to the centralised climate discourse in *People's Daily* is the fragmented structure of storylines constructed around the key governmental actors in *China Daily*. With a large number of storylines and actors (see Appendix D), the constructed network is identified to be very complicated in *China Daily*.

The constructed climate discourse network shows that Chinese governmental actors were linked to storylines including 'development', 'energy consumption', 'ecology', 'no target' and 'different resp'. In this sense, development was constructed and identified as the primary concern of the Chinese governmental actors cited in the coverage. After 4<sup>th</sup> June, 2007, these storylines under the development discourse remained constructed to be linked to a wide range of governmental actors.

Table 7.2 shows that the change in the constructed climate discourse networks comes around, to some degree, the key elements of the policy document in *China Daily* in 2007. However, the paper did not repeat the governmental voice completely as various storylines and actors were constructed and cited in the networks. This is demonstrated by the nature of *China Daily*, which is recognised as an official and relatively open paper.

In 2007 in *China Daily*, climate change issues had been discursively constructed as economic opportunity in the coverage being linked to a wide range of actors including the UNDP, Bayer, Tsinghua, and the National Climate Centre (NCC). It is worth noting that NCC was linked to a concern about economic impacts caused by climate change and the importance of securing agricultural development in the constructed discourse network. Although NCC is not defined as a governmental actor, it is responsible for providing relevant scientific data and it can influence the decision-making of climate change policy in China. Also, NCC is institutionally subordinate to the China Meteorological Administration. Therefore, the link between NCC and the storyline suggests the

emerging idea of low carbon economy in the governmental voices constructed and represented in *China Daily* even in 2007.

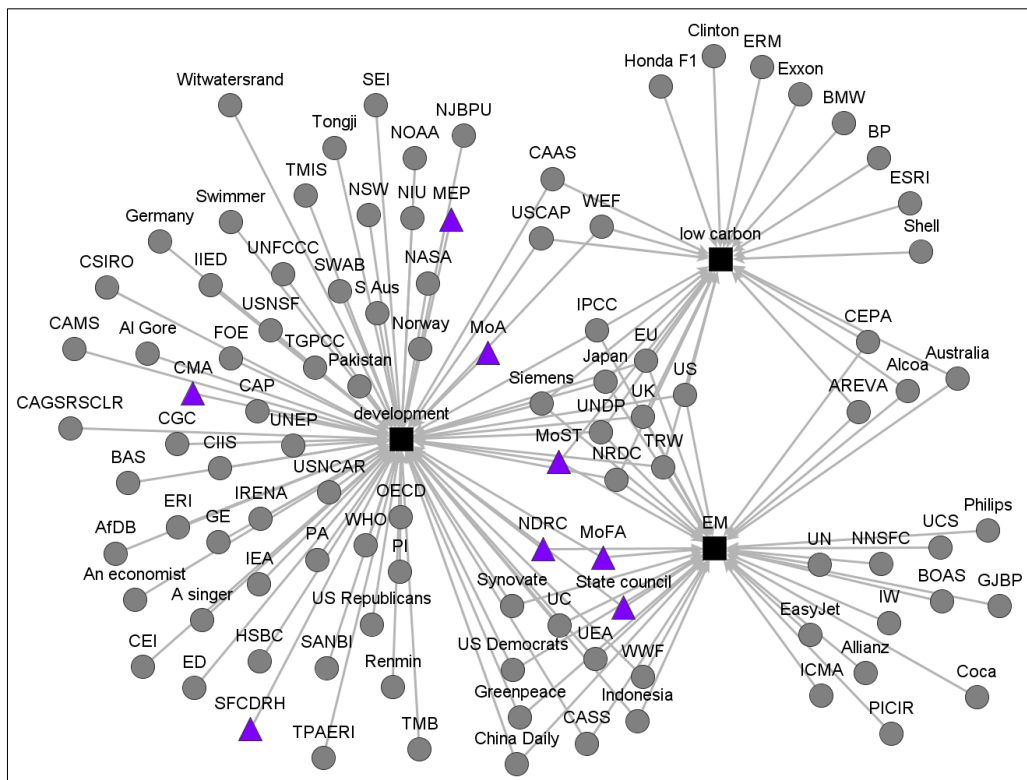
**Table 7.2 Storylines and key policy elements around 4<sup>th</sup> June, 2007 in *China Daily***

<b>Dimension</b>	<b>Before the programme</b>	<b>The programme (4<sup>th</sup> June, 2007)</b>	<b>After the programme</b>
<b>Economy</b>	Development Economic opportunity Economic tools	Development	Development Economic opportunity Economic tools
<b>Energy and emissions</b>	Energy consumption Energy mix Technology	Carbon sink Energy consumption Energy mix Technology	Carbon sink Energy consumption Energy mix Technology Transformation
<b>Public involvement</b>	Awareness Participation	Awareness	Awareness Participation
<b>Science and ecology</b>	Adaptation Ecology  Scientific certainty Surviving	Adaptation Ecology Research	Adaptation Ecology Research Scientific certainty Surviving
<b>Responsibility</b>	   Different responsibilities	   Different responsibilities	China's responsibility Developed countries' responsibility Different responsibilities

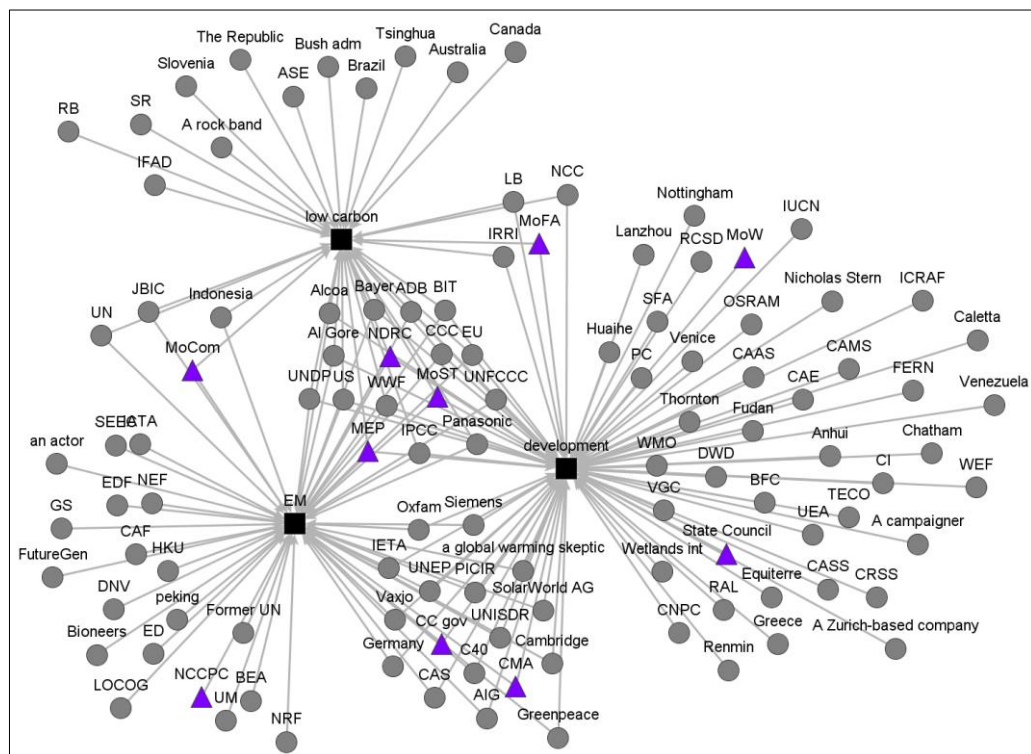
As revealed in Chapter 6, compared to *People's Daily*, *China Daily* provides a platform for citing various non-state actors particularly including business claim-makers such as Shell, BP, Exxon and BMW etc and non-governmental organisations (NGOs) such as Greenpeace and Friends of the Earth (FoE).

#### **7.2.4 *China Daily*: Dominant constructed discourse networks within the six months around the release of the 2007 National Climate Change Programme**

According to Figures 7.3 and 7.4, development was constructed and identified as the dominant discourse when it was linked to the majority of governmental actors within the six months before and after 4<sup>th</sup> June, 2007 in *China Daily*.



**Figure 7.3 Main constructed climate discourses within the six months before 4<sup>th</sup> June, 2007 in *China Daily***



**Figure 7.4 Main constructed climate discourses within the six months after 4<sup>th</sup> June, 2007 in *China Daily***

However, *China Daily* showed a major difference to *People's Daily* with a much wider range of various actors being structured around the development discourse in the constructed networks. As discussed in Chapter 6, *China Daily* cited various actors as news sources in the climate coverage. Academic actors were widely cited to construct the discourse of 'development'. Chapter 6 also shows that *China Daily* cited foreign governments and international organisations as news sources to construct the discourse 'development'. This is because many of them such as the EU, Germany, and the UK were linked to the storylines 'developed resp' and 'US resp', which were categorised into the discourse 'development'. In the discourse of 'development', addressing climate change is interpreted as the historical responsibility of Western countries particularly including the US. As discussed in Chapter 5, some European countries are cited as actors who support developing countries and emphasising global climate justice and they thus are linked to the development discourse in the constructed discourse networks.

While the development discourse network was constructed to be dominant, some governmental actors were linked to the discourse of ecological modernisation (EM). Before the critical point, the key governmental actors, such as the State Council, the NDRC, the MoST and the MoFA, were cited to construct the discourse of EM focusing on two storylines: 'tech' and 'economic tools'.

However, this does not suggest that governmental actors were cited and structured dominantly to construct the concept of ecological modernisation in 2007. Firstly, technology was not linked to the majority of governmental actors represented in the constructed network. Secondly, these governmental actors were cited in the coverage emphasising the importance of the CDM which was categorised into the storyline 'economic tools'. Because of the lack of other economic tools such as taxes and financial incentives, it was not evident that the notion of ecological modernisation should be constructed and identified as the dominant discourse in the coverage before the critical point in 2007.

Similarly, after the critical point in 2007, while the ecological modernisation (EM) discourse network contained the key governmental actors, it was not constructed and identified as the dominant discourse in the coverage. This is

because those storylines under the discourse were linked to the majority of governmental actors in a fragmented way. For example, 'transformation' was linked to MEP, and 'economic tools' was connected with NDRC and MoST. As discussed in Chapter 6, different governmental actors can be cited to have links to different storylines in the constructed network. Therefore, the ecological modernisation discourse network was constructed and structured successfully in the climate change coverage of *China Daily* but it was not identified as the dominant constructed discourse.

The majority of business actors, such as Exxon, BP, Alcoa and Coca, were cited and structured to construct the discourse of 'low carbon', when they were cited to construct the storyline 'economic opportunity'. However, NGOs such as Greenpeace and WWF were not linked to the discourse 'low carbon' in the constructed network. These environmental NGOs were cited to construct the storylines concerning environmental protection and ecological issues. As revealed in Chapter 6, Greenpeace could be structured and identified clearly in *China Daily*. However, it was cited to construct the consequence of climate change and the responsibilities of developed countries in the coverage. It was not constructed to be linked to the low carbon discourse until in 2009.

After the critical point, the low carbon discourse was linked mainly with foreign governments, business actors and Chinese governmental bodies. The Ministry of Commerce (MoCom) was cited with a statement that corporate responsibility should play an important role in addressing climate change which is categorised into the storyline 'participation'. However, this did not change the basic structure of the constructed dominant discourse of development. Therefore, the constructed discourse of development was identified as the dominant discourse network constructed around the critical point in 2007 in *China Daily*.

#### **7.2.5 Southern Weekend: Constructed climate discourse network within the six months around the release of the 2007 National Climate Change Programme**

Compared to *China Daily* with dense networks, *Southern Weekend* constructs very fragmented networks. There were two governmental actors identified in the climate discourse network before 4<sup>th</sup> June, 2007 in *Southern Weekend* (Appendix D). MoST was cited in the coverage supporting the deployment of

the CDM as a solution to climate change. CMA was linked to the storylines ‘research’, ‘scientific certainty’ and ‘ecology’ in the constructed network. In general, compared to *People’s Daily* and *China Daily*, *Southern Weekend* cited governmental actors as news sources to construct climate discourse. More importantly, the key governmental actors like the Chinese Central government, the State Council, MoFA and NDRC had not been found within the six months before 4<sup>th</sup> June, 2007 in *Southern Weekend*.

After 4<sup>th</sup> June, 2007, the NDRC and the Office of National Coordination Committee on Climate Change (NCCCC) were identified in the constructed climate change discourse network in *Southern Weekend*. Generally speaking, although NCCCC, NDRC and MoST were not apparently linked to the same set of storylines, they were collectively cited in the coverage to construct stories about economic development and different historical responsibilities.

**Table 7.3 Storylines and key policy elements around 4<sup>th</sup> June, 2007 in *Southern Weekend***

<b>Dimension</b>	<b>Before the programme</b>	<b>The programme (4<sup>th</sup> June, 2007)</b>	<b>After the programme</b>
<b>Economy</b>		Development	Development
<b>Energy and emissions</b>		Carbon sink Energy consumption Energy mix Technology	Energy consumption
<b>Public involvement</b>		Awareness	
<b>Science and ecology</b>	Ecology Research Scientific certainty	Adaptation Ecology Research	Ecology  Scientific certainty
<b>Responsibility</b>	Developed countries’ responsibility	Different responsibilities	Different responsibilities Developed countries’ responsibility

After the critical point in 2007, there were two storylines namely ‘economic opportunity’ and ‘China resp’ indicating a change in the constructed climate change discourse in *Southern Weekend*. Germany was cited as a news source

for discursively constructing climate change as economic opportunity through emphasising cooperation between China and Germany in investing in the market of technologies of environmental protection. Another storyline is 'China resp' linked to NCCCC which is an important governmental body for climate change issues in China. Surprisingly, this important governmental actor was cited recognising that the world could not reduce emissions substantially without China's participation. Although this storyline was very marginal, it was very important to see that Chinese governmental discourse was more or less linked to the concept that China had the responsibility for addressing climate change in the constructed networks in 2007.

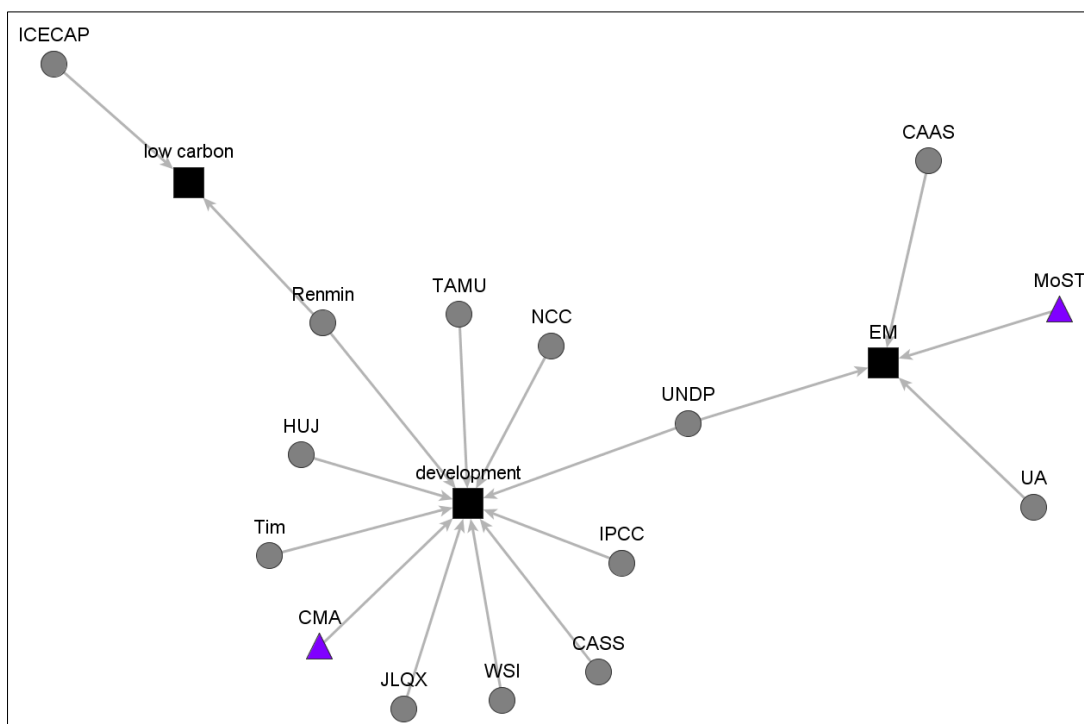
Therefore, as explained above, the change in the constructed climate discourse networks was not directly relevant to those key elements of the policy document (see Table 7.3). This is determined by the nature of *Southern Weekend* identified as a commercialised and relatively open paper.

#### **7.2.6 *Southern Weekend*: Dominant constructed discourse networks within the six months around the release of the 2007 National Climate Change Programme**

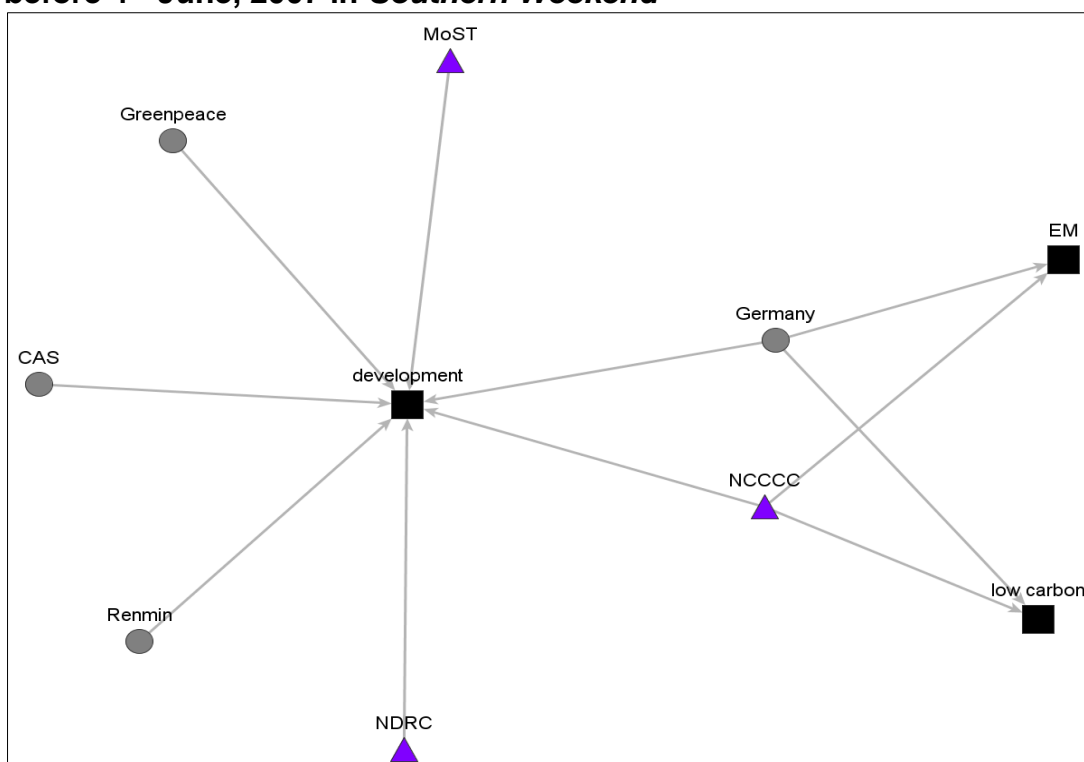
Being different to *People's Daily* and *China Daily*, *Southern Weekend* had not cited a large number of actors in the coverage. For example, the statement of controlling and reducing energy consumption (energy consumption) was only linked to the World Security Institute (WSI) (see Figure 7.5). A majority of actors were linked to the discourse of development focusing on the concern about and the responsibility for addressing climate change in the constructed networks (see Figure 7.5 and Figure 7.6). It is very clear to see that the development discourse network was identified as the dominant position in the constructed climate change discourse in the coverage. Greenpeace was cited to construct the development discourse network after the critical point. As revealed in Chapter 6, it was cited being linked to the storyline 'ecology' raising the negative ecological impact caused by climate change in the constructed discourses.

Similarly to *China Daily*, *Southern Weekend* did not cited Greenpeace as an actor to construct the low carbon discourse in 2007. The discourses of ecological modernisation (EM) and low carbon were not constructed and identified to be linked to the majority of actors.





**Figure 7.5 Main constructed climate discourses within the six months before 4<sup>th</sup> June, 2007 in *Southern Weekend***



**Figure 7.6 Main constructed climate discourses within the six months after 4<sup>th</sup> June, 2007 in *Southern Weekend***

## 7.3 Climate change discourse network analysis of newspapers in 2009

### 7.3.1 *People's Daily*: Constructed climate discourse network within the six months around the announcement of China's positions in the 2009 Copenhagen climate summit

As with the discourse networks in 2007, the key governmental actors of China were cited in playing a central role in the constructed climate change discourse network in *People's Daily* in 2009 (see Appendix E). On the one hand, as discussed in Chapter 5, *People's Daily* still constructed the importance of economic development and historical responsibility in the coverage. This demonstrates that the paper can construct the discourse in line with the official voices because development and responsibility remained the fundamental governmental positions in climate change negotiations even in 2009 (see Chapter 1).

On the other hand, in contrast to the constructed climate discourse in 2007, the storylines of the EM discourse were structured in the constructed network before the announcement of the target of reducing carbon intensity and even before the Copenhagen climate change conference in *People's Daily* in 2009. The storylines, such as 'transformation', 'surviving', 'tech' and 'economic tools', had not only been linked to governmental actors but also they were linked to other non-state actors such as Siemens and the World Bank. Similarly, after the critical point in 2009, key governmental actors remained represented as the central power of the constructed climate change discourse in *People's Daily*. Table 7.4 shows the similarity between the constructed discourses of climate change before and after the critical moment. This is as expected given that *People's Daily*, being a mouthpiece, changed its climate change discourses in the coverage in line with official positions.

However, there are some nuances between the constructed networks. Firstly, the storyline of developing countries' responsibility was identified as fading away in the constructed discourse network since the Copenhagen conference. It was only linked to MoFA and Tsinghua in the constructed network (see Table 7.4). This is because *People's Daily* cited the various actors to construct stories of raising the responsibility of developed countries and emphasising the principle of common but differentiated responsibilities during the conference.

**Table 7.4 Storylines and key policy elements around 26<sup>th</sup> November, 2009 in *People's Daily***

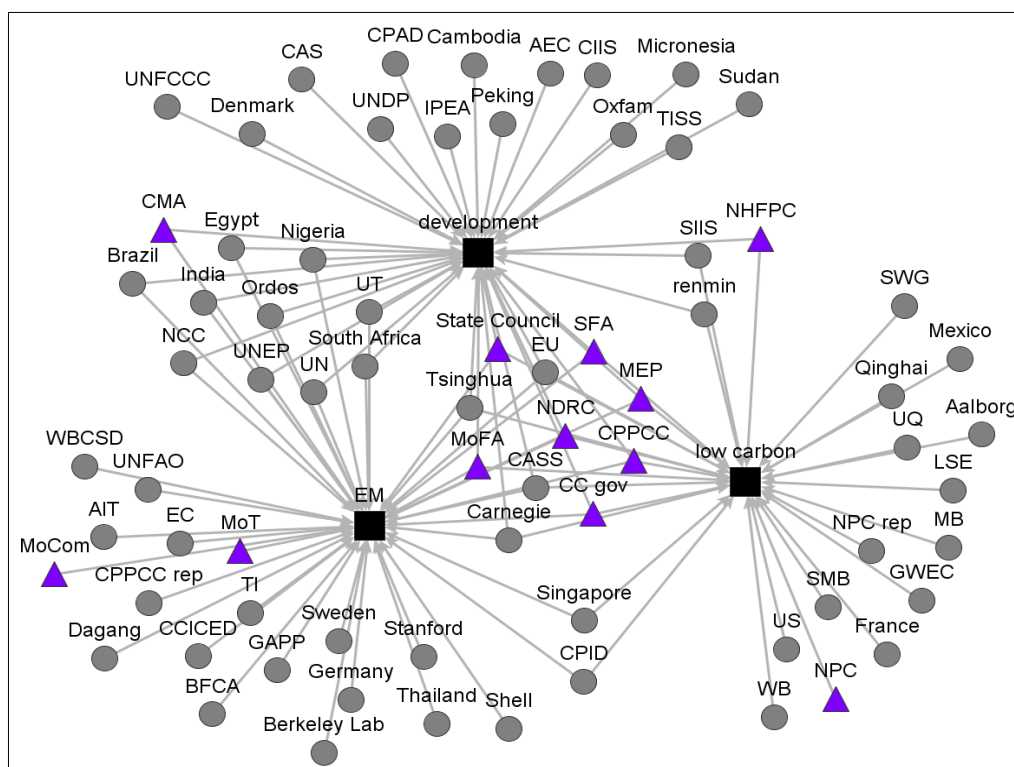
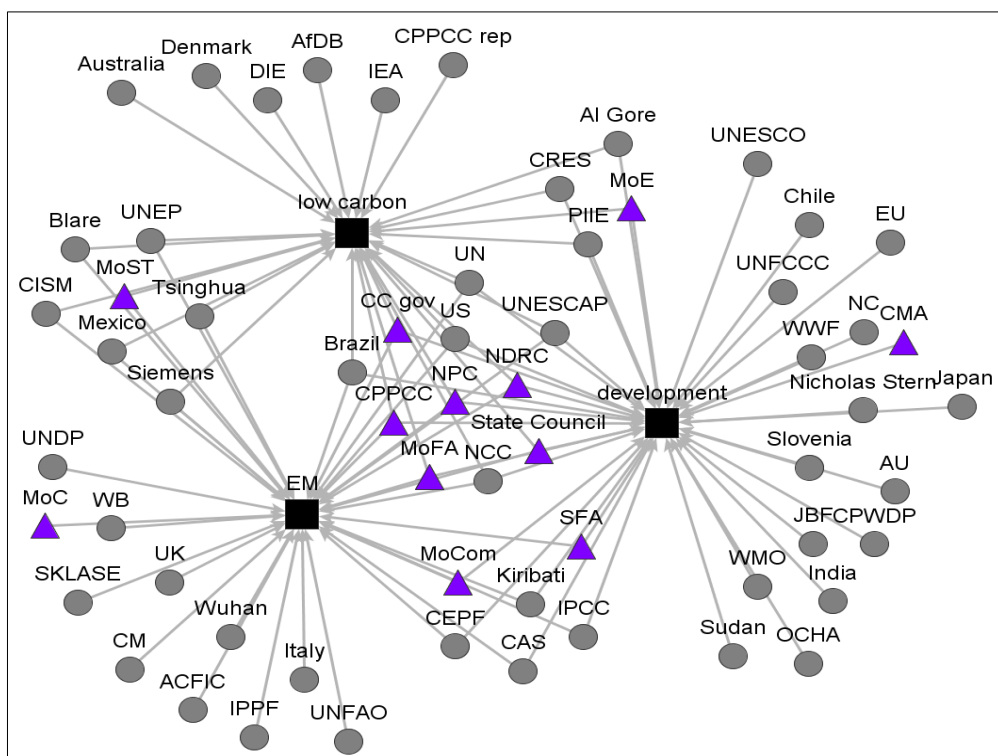
<b>Dimension</b>	<b>Before the announcement</b>	<b>The announcement (26<sup>th</sup> November, 2009)</b>	<b>After the announcement</b>
<b>Economy</b>	Development Economic opportunity Economic tools	Development  Economic tools	Development Economic opportunity Economic tools
<b>Energy and emissions</b>	Carbon intensity Carbon sink Energy consumption Energy mix Technology Transformation	Carbon intensity Carbon sink Energy consumption Energy mix Technology Transformation	Carbon intensity Carbon sink Energy consumption Energy mix Technology Transformation
<b>Public involvement</b>	Awareness Behaviour	Awareness Behaviour	Awareness Behaviour
<b>Science and ecology</b>	Adaptation Scientific certainty Surviving	Adaptation  Surviving	Adaptation Scientific certainty Surviving
<b>Responsibility</b>	Different responsibilities  Developed countries' responsibility  Developing countries' responsibility	Different responsibilities	Different responsibilities  Developed countries' responsibility

Secondly, while economic opportunity was constructed as a popular storyline before and after the critical point, it had not been identified in the announcement (see Table 7.4). This means that while the green and low carbon economy was structured in the constructed climate discourse in *People's Daily*, the Chinese government had not yet discursively clarified it in the climate policy rhetoric in 2009. In addition to the storyline of economic opportunity, 'developing resp' and 'developed resp' were not reflected in the announcement. The announcement was issued before the Copenhagen conference, and it was designed to show positive Chinese attitudes towards addressing climate change. As such, it did not exhibit the storyline calling for developed countries to play a leading role in addressing climate change.

### **7.3.2 *People's Daily*: Dominant constructed discourse networks within the six months around the announcement of China's positions in the 2009 Copenhagen climate summit**

Based on the centralised storylines in the constructed discourse network, these governmental actors had dramatically been linked to the discourse of ecological modernisation before the critical point in 2009 (see Figure 7.7). Also, having been linked to a set of storylines such as 'transformation', 'surviving', 'tech' and 'economic tools', a cluster of actors were cited to construct the dominant discourse network. Therefore, the dominant constructed discourse is 'ecological modernisation'. Similarly, the general structure of the constructed climate change discourse networks had not changed since 26<sup>th</sup> November, 2009 in *People's Daily* (see Figure 7.8). The stability of those key governmental actors within the constructed climate change discourse networks in *People's Daily* is mainly because Chinese political leaders usually made official speeches which reflect the contents of climate-related issues. Therefore, the discourse network of ecological modernisation continued to be identified as the dominant one after the critical point.

However, this does not mean that *People's Daily* discursively discards an emphasis on development and refuses the notion of low carbon (see Figure 7.7). On the one hand, a wide range of actors particularly those governmental bodies in the constructed discourse network of ecological modernisation remained discursively linked to the discourse of development in *People's Daily*. For example, as discussed in Chapter 6, India was cited to raise the storylines 'development', 'developed countries responsibilities' and 'different responsibilities' in the constructed discourse in 2009. It was identified clearly in the development discourse network even after the critical point. Another prominent example is Denmark, which was cited in the paper to shift its discourse from low carbon to development across the critical point. This is not to say that Denmark changed its position sharply. It is because Denmark was cited as a news source for supporting the principle of common but differentiated responsibilities in the coverage. *People's Daily* cited Rasmussen, the Prime Minister of Denmark, to construct a support for China's insistence on the fundamental principle under the UNFCCC.



On the other hand, the discursive emergence of the low carbon economy implies a shift from economic priority to a win-win strategy constructed in the coverage. Obviously, the idea of the low carbon economy was emerging in the constructed climate change discourse in 2009. Particularly, the Chinese governmental actors were cited in the coverage to construct green and low carbon economy. It is important to note that the US was cited to construct the low carbon discourse clearly around the critical point. Its link to the constructed development discourse was identified before the critical point because the US was cited to raise the responsibility of the developed countries in the coverage. As revealed in Chapter 6, President Obama expressed a much more proactive attitude towards addressing climate change than Bush Administration in 2009.

### **7.3.3 *China Daily*: Constructed climate discourse network within the six months around the announcement of China's positions in the 2009 Copenhagen climate summit**

Differently from the centralised climate discourse around governmental actors in *People's Daily*, governmental bodies and their links to storylines were fragmented in the constructed discourse networks in *China Daily* (see Appendix E). The MoFA was discursively linked to concerns about economic development and responsibility. The NDRC could be found being linked to 'economic tools' and 'transformation' raising the efficiency of production and improving the economic structure. Echoing the weak role in the political system of China, the MEP was discursively linked to the storyline 'local' which played a very marginal role in the constructed climate change discourse network. This confirms the discussion in Chapter 1 and the finding in Chapter 6 that the MEP plays a proactive role in addressing climate change but it was cited as a marginal news source in the coverage in China.

Similarly to *People's Daily*, *China Daily* constructed the storyline 'economic opportunity' from a popular idea linked to academic and business actors cited in 2007 to a statement widely linked to key governmental actors including the State Council and NDRC cited in the constructed network in 2009.

It is worth noting that the storyline 'major emitters' was discursively linked to a wide range of actors particularly including the State Council and MoFA. This storyline was not popular (see Chapter 5) and was not linked to key

governmental actors in 2007 (see Chapter 6). This is because it implies that those major emitters and economies especially including China should be responsible for addressing climate change. However, in 2009, its link to governmental actors means that China's positive attitude towards the responsibility of major emitters and emerging economies was constructed and identified in *China Daily*.

**Table 7.5 Storylines and key policy elements around 26<sup>th</sup> November, 2009 in *China Daily***

<b>Dimension</b>	<b>Before the announcement</b>	<b>The announcement (26<sup>th</sup> November, 2009)</b>	<b>After the announcement</b>
<b>Economy</b>	Development Economic opportunity Economic tools	Development  Economic tools	Development Economic opportunity Economic tools
<b>Energy and emissions</b>	Energy mix Carbon intensity Carbon sink Technology Transformation	Energy consumption Energy mix Carbon intensity Carbon sink Technology Transformation	Energy mix Carbon intensity Carbon sink Technology Transformation
<b>Public involvement</b>	Behaviour	Awareness Behaviour	Awareness Behaviour Participation
<b>Science and ecology</b>	Scientific certainty  Surviving	Adaptation  Surviving	Scientific certainty Uncertainty Surviving
<b>Responsibility</b>	China's responsibility Developed countries' responsibility Developing countries' responsibility Different responsibilities Major emitters US responsibility	Different responsibilities	China's responsibility Developed countries' responsibility  Different responsibilities Major emitters US responsibility No target

Within the six months after the critical point, the constructed climate change discourse network changed dramatically in *China Daily*. Obviously, in the constructed network, the governmental actors were not cited as using the EM storylines such as 'behaviour', 'surviving', 'transformation' and 'tech'. Surprisingly, the storyline 'economic tools' developed a marginal role in the network. It appears that the discourse of ecological modernisation was constructed and identified to fade dramatically after the critical point in the coverage.

This major shift in the constructed climate change discourse around the critical point reflects the nature of *China Daily*. As explained in Chapter 2, *China Daily* is an official newspaper but it is relatively open to various voices. On the one hand, *China Daily* is similar to *People's Daily* constructing a set of storylines similar to the policy rhetoric within the six months even before the critical point (see Table 7.5). In the constructed climate change discourse network, discussions on public awareness were discursively replaced with a focus on behaviour change. The storyline 'behaviour' could also be identified in the announcement. In terms of the responsibility, the policy document exhibits the insistence on the fundamental principles of addressing climate change. The consistency in the constructed discursive changes reflects the nature of *China Daily* being a national official newspaper.

On the other hand, *China Daily* does not completely construct official messages in line with governmental positions (see Table 7.5). For example, the storyline 'adaptation' was declining as many actors were discursively linked to the storyline 'surviving' in the constructed discourse network. However, the announcement still reflected the importance of 'adaptation'.

Some storylines which were not identified in the official document were emerging in the constructed climate discourse network after the critical point. As discussed in Chapter 5, the prominent example is the storyline 'uncertainty', which is inconsistent with many storylines such as 'surviving' and 'scientific certainty' structured in the constructed climate discourse network. This demonstrates that a broader range of storylines beyond official voices can be reported and found in *China Daily*.

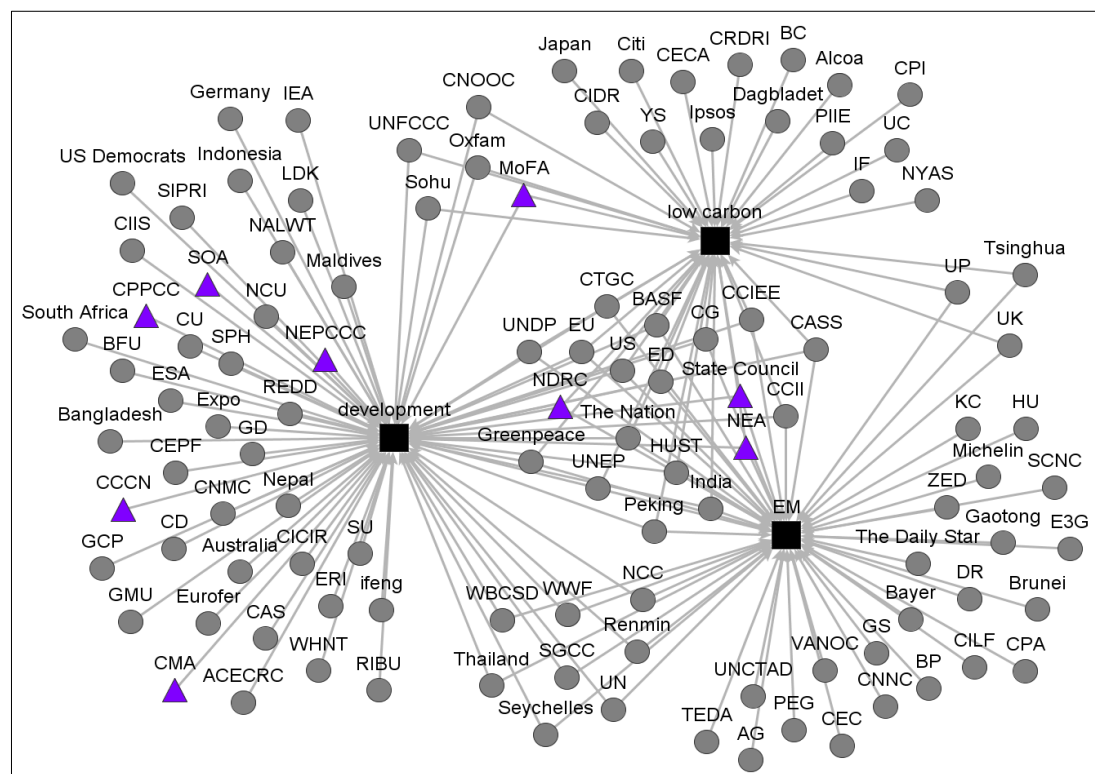
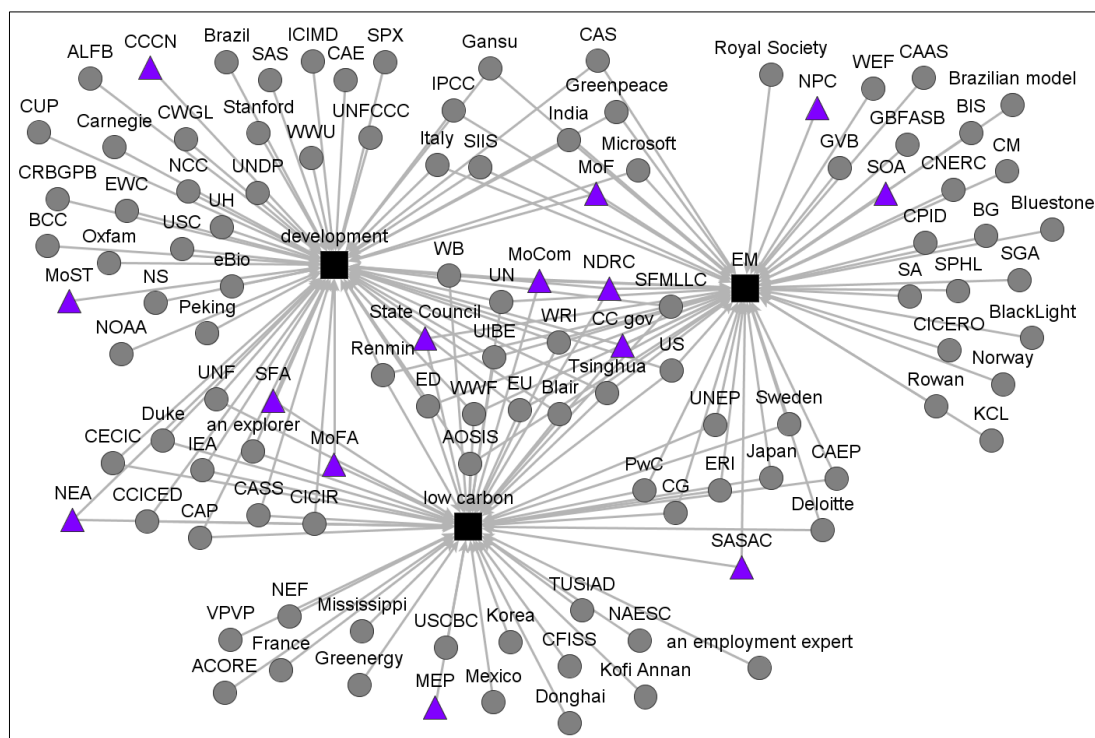


#### **7.3.4 *China Daily*: Dominant constructed discourse networks within the six months around the announcement of China's positions in the 2009 Copenhagen climate summit**

The dominant climate change discourse network was constructed and identified to move from development in 2007 to ecological modernisation within the six months before the critical point in 2009 in *China Daily* (see Figure 7.9). This is similar to the network in *People's Daily* in 2009. On the one hand, a wide range of actors including key governmental bodies were not disconnected with the discourse of development constructed and identified in the coverage. On the other hand, those storylines under the ecological modernisation discourse such as 'economic tools', 'transformation' and 'carbon intensity' were collectively linked to governmental actors cited in the constructed network before the critical point. This demonstrates that the discourse of ecological modernisation had been dominant in the constructed climate change discourse network. Also, this demonstrates that *China Daily* constructed high expectations towards the Copenhagen climate change summit.

The discourse of low carbon was not identified as being dominant in the constructed discourse network before the critical point in 2009. This is because governmental actors were cited to be very fragmented in this network. For example, the Chinese Central government, NPC, MoST and MoFA were not discursively linked to the storyline 'economic opportunity'. Similarly, the storyline 'major emitters' was far away many governmental actors in the constructed network.

After the critical point in 2009, various actors were cited in criticising China's strategies of reducing emissions and calling for major emitters to undertake the responsibility for addressing the issues during and after the conference. For example, as discussed in Chapter 5, the Environmental Defense was cited as an actor raising a doubt about China's engagement in cutting emission in the coverage. As the MoFA expressed in the coverage, China was facing international pressure to set an ambitious and legally-binding target. Therefore, in order to respond to this sort of criticism and pressures, *China Daily* cited various actors as news sources defending Chinese fundamental principles of addressing climate change through emphasising the importance of economic development and the principle of common but differentiated responsibilities.



However, the shift to the discourse of development among governmental actors did not imply an obstacle to the growth of the discourse of ecological modernisation among a wide range of non-state actors cited in *China Daily* (see Figure 7.10). The demand of economic transformation and change in public behaviour was constructed to be rising after the critical point in *China Daily*. Therefore, development and ecological modernisation were constructed and identified as two competing discourse networks.

While the discourse 'low carbon' was linked to many actors including some governmental bodies, its storylines, such as 'market' and 'low carbon energy', were not identified in the central place of the constructed network. Differently to *People's Daily*, *China Daily* linked India to the low carbon discourse in the constructed network after the critical point. India was cited to raise the responsibilities of China and developing countries in the coverage. As expected in Chapter 2, this demonstrates that *China Daily* can cite a broader range of voices than *People's Daily* to construct its discourse.

### **7.3.5 *Southern Weekend*: Constructed climate discourse network within the six months around the announcement of China's positions in the 2009 Copenhagen climate summit**

Given that *Southern Weekend* is categorised as a commercialised newspaper, the constructed climate change discourse network remained fragmented in 2009 while it looks denser than those in 2007 (see Appendix E). Unlike *People's Daily* and *China Daily*, a wide range of governmental actors cannot be identified in the constructed climate change discourse network in *Southern Weekend*. This echoes the feature of the newspaper being highly-marketised.

The storyline 'different resp', which reflects the fundamental principle of addressing climate change, was identified to have a marginal role in this constructed climate discourse network. Similarly, those popular storylines in *People's Daily* and *China Daily*, such as 'energy mix', 'scientific certainty' and 'carbon intensity', were constructed to be very marginal in *Southern Weekend*. Obviously, the change in the constructed climate change discourse around the critical point in *Southern Weekend* was not in line with the official discourse derived from the policy document (see Table 7.6).

The prominent feature of the constructed climate discourse network is the rise of the storyline ‘uncertainty’. Firstly, it demonstrates that *Southern Weekend* could construct various storylines and its discursive change was not necessarily in line with governmental positions. Secondly, as the storyline ‘uncertainty’ was discursively not linked to others, it was not identified as a mainstream view on climate change in the coverage of China (see section 6.1.4. Chapter 6).

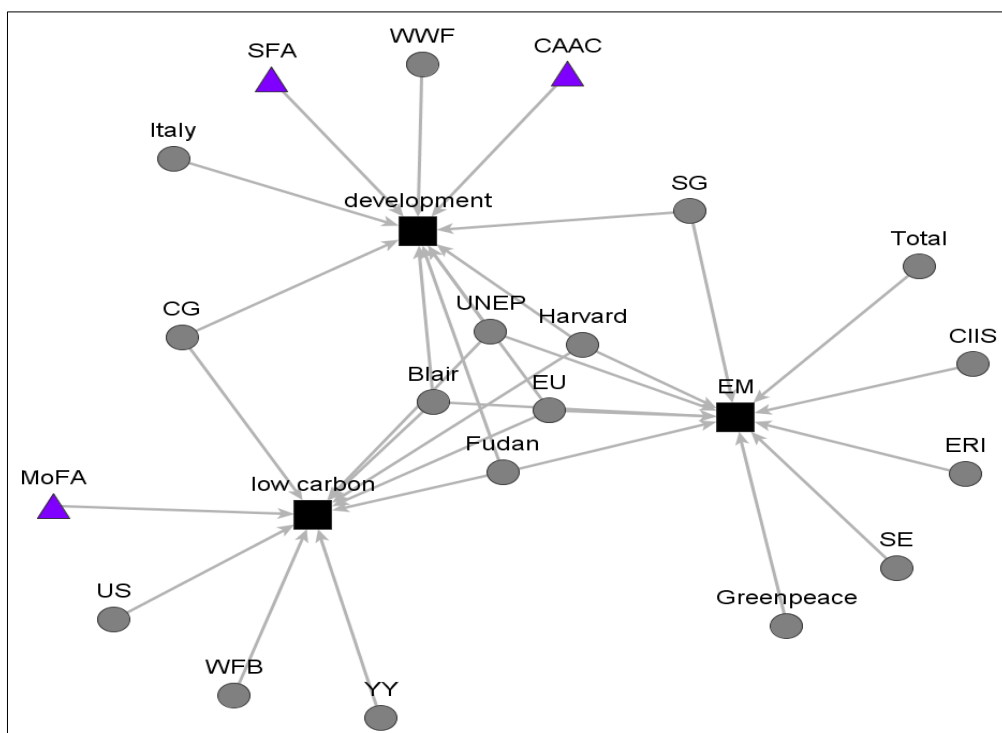
**Table 7.6 Storylines and key policy elements around 26<sup>th</sup> November, 2009 in *Southern Weekend***

<b>Dimension</b>	<b>Before the announcement</b>	<b>The announcement (26<sup>th</sup> November, 2009)</b>	<b>After the announcement</b>
<b>Economy</b>	Development Economic tools	Development Economic tools	Economic tools
<b>Energy and emissions</b>	    Technology Transformation	Energy consumption Energy mix Carbon intensity Carbon sink Technology Transformation	Carbon intensity   Transformation
<b>Public involvement</b>		Awareness Behaviour	Behaviour
<b>Science and ecology</b>	  Surviving	Adaptation  Surviving	Scientific certainty Uncertainty Surviving
<b>Responsibility</b>	China’s responsibility Developed resp Different responsibilities Major emitters No cap US responsibility	Different responsibilities	China’s responsibility  Different responsibilities Major emitters No target US responsibility

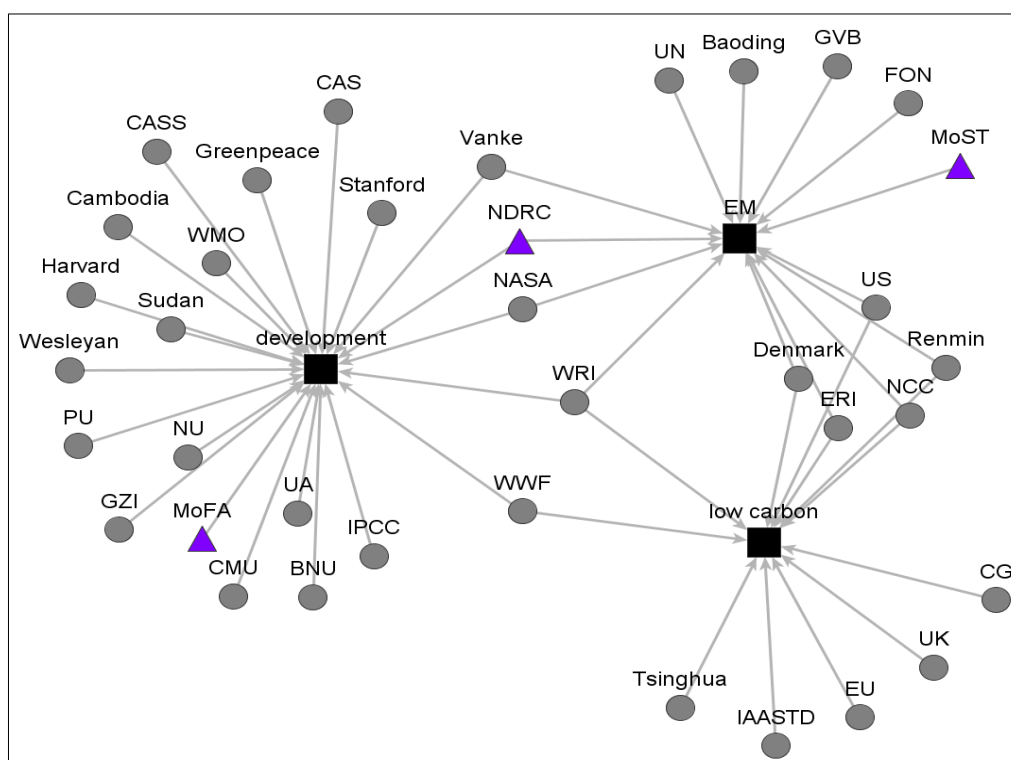
### **7.3.6 *Southern Weekend*: Dominant constructed discourse networks within the six months around the announcement of China's positions in the 2009 Copenhagen climate summit**

It is very difficult to identify a constructed dominant discourse network before the critical point in *Southern Weekend*. This is mainly because of a lack of governmental actors cited in the coverage. However, it is clear that these three constructed discourses were competing with each other. While two governmental actors, the State Forestry Administration (SFA) and the Civil Aviation Administration of China (CAAC), were cited to construct the development discourse, they were not identified as having a key role in addressing climate change issues in China. The constructed low carbon discourse was linked to MoFA. But it seems that the low carbon discourse was not clearly linked to the majority of actors. While the ecological modernisation discourse was not obviously linked with governmental actors, it remained linked with various actors, which was similar to 'development' and 'EM'. Therefore, *Southern Weekend* constructed the shift from the dominant discourse of development in 2007 to three competing discourses identified in the coverage in 2009 (see Figure 7.11).

After the critical point, the constructed discourse of ecological modernisation became dominant in *Southern Weekend* (see Figure 7.12). Firstly, these storylines including 'transformation', 'carbon intensity', 'surviving' and 'behaviour' were structured in the constructed climate discourse network. Secondly, 'carbon intensity' and 'transformation' under the discourse of EM were discursively linked to NDRC and MoST. Therefore, the discourse network of ecological modernisation was constructed to be dominant in the coverage. While the development discourse was linked to a wide range of actors, it did not dominate the constructed climate discourse after the critical point in *Southern Weekend*. Firstly, storylines like 'development' and 'ecology' under the development discourse were constructed to be very marginal in the climate network. Secondly, some actors were linked to the storyline 'uncertainty' in the constructed discourse network. Indeed, as the storyline was isolated from other statements in the network, it was not constructed as a dominant storyline in the climate discourse. Therefore, development was not identified as a dominant discourse after the critical point in 2015 in *Southern Weekend*.



**Figure 7.11 Main constructed climate discourses within the six months before 26<sup>th</sup> November, 2009 in *Southern Weekend***



**Figure 7.12 Main constructed climate discourses within the six months after 26<sup>th</sup> November, 2009 in *Southern Weekend***

It is important to note that *Southern Weekend* can and did construct various ideas on climate change issues compared to *People's Daily* and *China Daily*. A prominent example is Denmark and its link to the constructed low carbon discourse network after the critical point (see Figure 7.12). While Denmark was cited as an actor supporting the fundamental principle of China identified in *People's Daily*, it was cited as a news source for emphasising the key role of major emitters in reducing emissions in *Southern Weekend*.

## **7.4 Climate change discourse network analysis of newspapers in 2015**

### **7.4.1 *People's Daily*: Constructed climate discourse network within the six months around the 2015 submission of INDCs of China**

The year 2015 witnessed a dramatic change in the constructed climate change discourse network with a focus on the low carbon economy. While those storylines such as 'economic opportunity', 'low carbon energy', 'market' and 'major emitters' were located at the central place of the constructed climate discourse networks, the concern about development became marginal within the six months before the critical point in *People's Daily* (see Appendix F). Although governmental actors continued to be cited to construct the climate change discourse networks, the Chinese Central government (CC gov) was not cited as a key actor before the critical point in 2015. This is because the Chinese President did not make a large number of speeches directly referring to the topic of climate change within the six months before the critical point in the coverage.

As discussed in Chapter 5, the storyline 'low carbon energy' refers to a resolution on constraining the use of coal. The storyline was constructed in coverage to show China's remarkable progress in addressing climate change vowing to take action on controlling the consumption of coal.

The storyline 'economic opportunity' continued to be a key element structured in the constructed climate discourse network and was represented around governmental actors in *People's Daily* in 2015. In addition to 'economic opportunity', other storylines such as 'market' and 'major emitters' had been emerging in the constructed climate change discourse network. It appears that climate change issues had dramatically been discursively constructed towards

low carbon path in the climate coverage. The rise of the ‘market’ storyline was determined by raising a positive attitude towards the control over the consumption of coal constructed in the coverage. An idea to build up the carbon trading system had been identified in the coverage. Also, the climate coverage constructed the emerging storyline ‘major emitters’ and called major economies, particularly China and the US to take action on reducing emissions.

**Table 7.7 Storylines and key policy elements around 30<sup>th</sup> June, 2015 in *People’s Daily***

<b>Dimension</b>	<b>Before the submission</b>	<b>The submission (30<sup>th</sup> June, 2015)</b>	<b>After the submission</b>
<b>Economy</b>	Economic opportunity	Economic opportunity	Development Economic opportunity
<b>Energy and emissions</b>	Low carbon energy Market Technology Transformation	Carbon sink Low carbon energy Market Technology Transparency	Low carbon energy Market Technology Transformation
<b>Public involvement</b>		Behaviour Participation	Participation
<b>Science and ecology</b>	Adaptation  Resilience Surviving	Local Resilience	Local Resilience Surviving
<b>Responsibility</b>	China’s responsibility Developed countries’ responsibility  Different responsibilities Major emitters	Developed countries’ responsibility Developing countries’ responsibility Different responsibilities	China’s responsibility Developed countries’ responsibility Developing countries’ responsibility Different responsibilities Major emitters

There was little change in the features of the storylines before and after the critical point. After 30<sup>th</sup> June, 2015, those storylines related to the discourse of low carbon, such as ‘economic opportunity’, ‘low carbon energy’ and ‘major emitters’, remained centralised in the constructed climate discourse network.



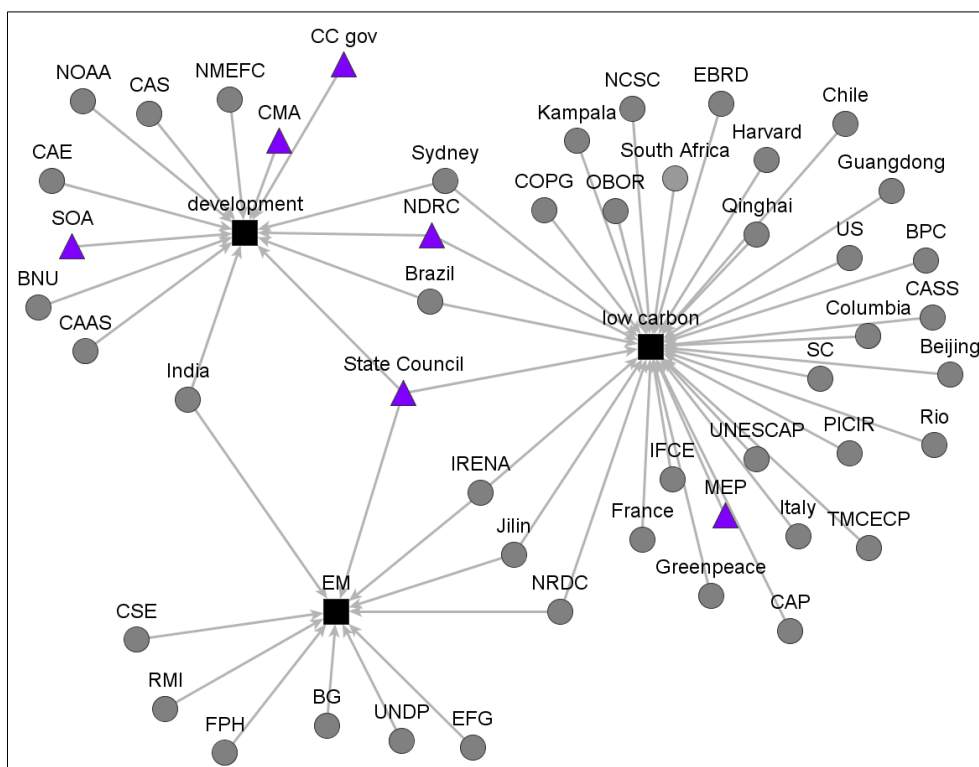
Meanwhile, these storylines concerning development and different responsibilities occurred in the central place of the network. Particularly, the storyline 'development' was widely linked to various actors after the critical point. This demonstrates that while the constructed climate change discourse of China moved to the low carbon path, it remained based on the fundamental principles of development and responsibility identified in the coverage of *People's Daily*.

Also, these storylines were not far different to the key policy elements of the submission of INDCs of China (see Table 7.7). This reflects the nature of *People's Daily* being the mouthpiece of official voices. However, as discussed in Chapter 5, it is worth noting that 'transparency' was derived from the policy document but it was not constructed and found in the climate change discourse network in *People's Daily* before and after the critical point. This does not mean that the storyline 'transparency' was not important in the constructed climate change discourses in the newspapers. Rather, a drastic decline in the storyline 'no target' reflects that the coverage did not construct resistance to the acceptance of a measurable and quantified target of emission reduction in 2015.

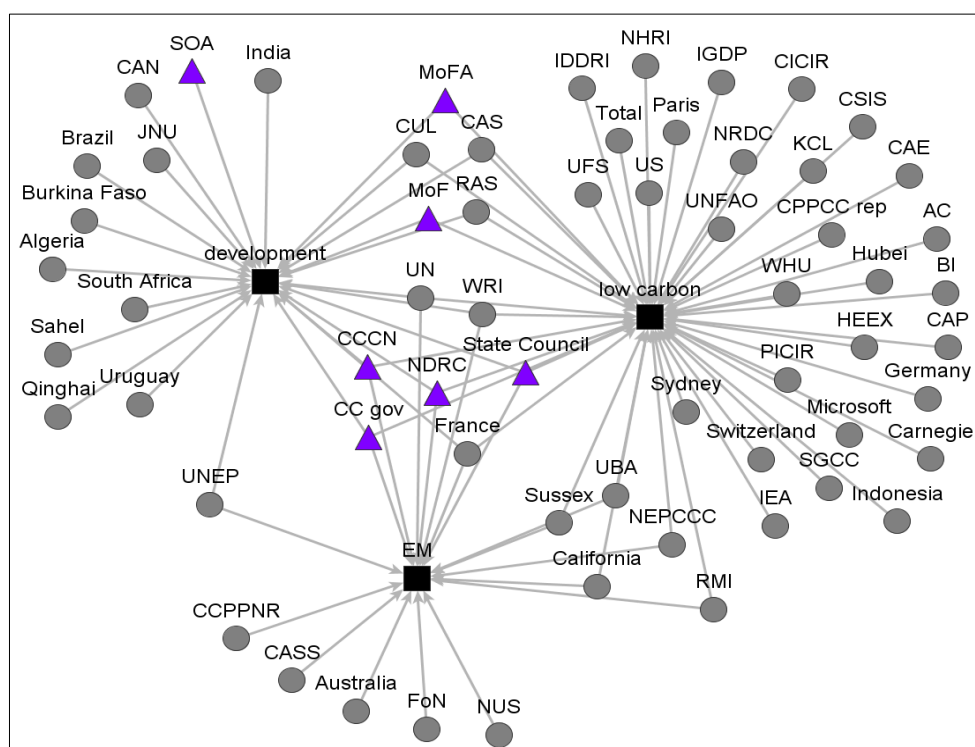
#### **7.4.2 *People's Daily*: Dominant constructed discourse networks within the six months around the 2015 submission of INDCs of China**

There is a clear picture of the dominant discourse of low carbon in the constructed networks before and after the critical point (see Figure 7.13 and Figure 7.14). Firstly, the discourse 'low carbon' was linked to the majority of actors in the constructed climate discourse network. This is very different to the networks in 2007 and in 2009. Secondly, the discourse of low carbon was dominant in the constructed network as it was linked to the governmental actors clearly. It appears that a number of actors were cited in the coverage moving from ecological modernisation to low carbon.

The US was clearly identified to be linked to the low carbon discourse in the constructed networks around the critical point in 2015 (see Figure 7.14). As revealed in Chapter 6, the US was linked to the storylines concerning low carbon economy and energy and a close climate cooperation between the US and China in the coverage of *People's Daily*.



**Figure 7.13 Main constructed climate discourses within the six months before 30<sup>th</sup> June, 2015 in *People's Daily***



**Figure 7.14 Main constructed climate discourses within the six months after 30<sup>th</sup> June, 2015 in *People's Daily***

However, it is worth noting that many actors, particularly governmental actors, remained cited in the coverage as supporting the fundamental principles of addressing climate change including economic development and historical responsibilities in 2015. The key governmental actors were cited to construct storyline 'different resp' and thus construct the discourse of development. This is because the principle of common but differentiated responsibilities remained a fundamental element of the Chinese constructed climate change discourse identified in the newspapers and policy rhetoric. This demonstrates that while the key governmental actors were cited to construct the low carbon discourse, they remained cited to insist the fundamental principle of different responsibilities between developed and developing countries in the coverage. For example, India was clearly linked to the development discourse as it was cited to raise the different historical responsibilities in the coverage of *People's Daily* (see Chapter 6).

#### **7.4.3 *China Daily*: Constructed climate discourse network within the six months around the 2015 submission of INDCs of China**

Compared to *People's Daily*, *China Daily* cited more governmental actors in the coverage before the critical point in 2015 (see Chapter 6). It is similar to the constructed climate change discourse network in 2009, in which storylines were also linked to a wide range of actors particularly governmental bodies in a fragmented way in 2015 in *China Daily*. However, being similar to *People's Daily*, *China Daily* constructed the rise of the storylines 'low carbon energy', 'market' and 'resilience' in the coverage in 2015 while they were even identified as marginal ones in 2009.

Being different to the networks in 2007 and 2009, the constructed discourse in 2015 shows that 'development' and 'developed resp' moved away the central place of the network. The majority of actors were cited to construct storylines such as 'economic opportunity' and 'low carbon energy' rather than those around the discourse of development which were very popular in 2007 and 2009. However, it is worth noting that these storylines concerning development remained linked to some governmental actors including MoFA and MEP.

After the critical point, being similar to the change in *People's Daily*, an important feature of the constructed network is the reoccurrence of

'development' and 'developed resp' around key governmental actors and in the central place in *China Daily*. The rising of these storylines under the discourse of development was mainly because these actors were cited in defending the common preference for national development and calling for developed countries to provide financial and technological support in terms of the 2015 Paris climate change negotiations.

However, while 'resilience' and 'market' under the low carbon discourse were clarified in the submission to UNFCCC in 2015, they had moved away the central place of the constructed network after the critical point. This demonstrates that *China Daily* did not completely construct the discourse in line with the governmental voice.

The storyline 'major emitters' was widely linked to many actors in 2015 while it had not been linked to the governmental bodies in 2007 and 2009 in *China Daily*. It is reasonable to assume that China was constructed to be sensitive to being branded as a major economy and emitter. This storyline indicates the responsibility of China to address climate change and it thus seems to contradict the fundamental principle of economic development and different historical responsibilities. However, in 2015, *China Daily* constructed a link between a dramatic change in governmental attitudes toward the storyline 'major emitters' and cooperation between the US and China in the coverage. Firstly, the coverage reported that the US and China admitted their major contributions to the cause of climate change and their important roles in reducing emissions identified in the coverage. They were engaged rhetorically in setting an outstanding example of addressing climate change for other major economies and emitters. Secondly, the coverage reported that the two largest emitters recognised the importance of investments in clean energy and technology and considered addressing climate change as an opportunity for accelerating economic growth.

After the critical point, on the one hand, *China Daily* constructed its climate discourse, to a great extent, around the key policy elements as it is a national official newspaper. On the other hand, some storylines such as 'development' occurred in the constructed network, which was not emphasised in the policy document. This is simply because the concern about economic development

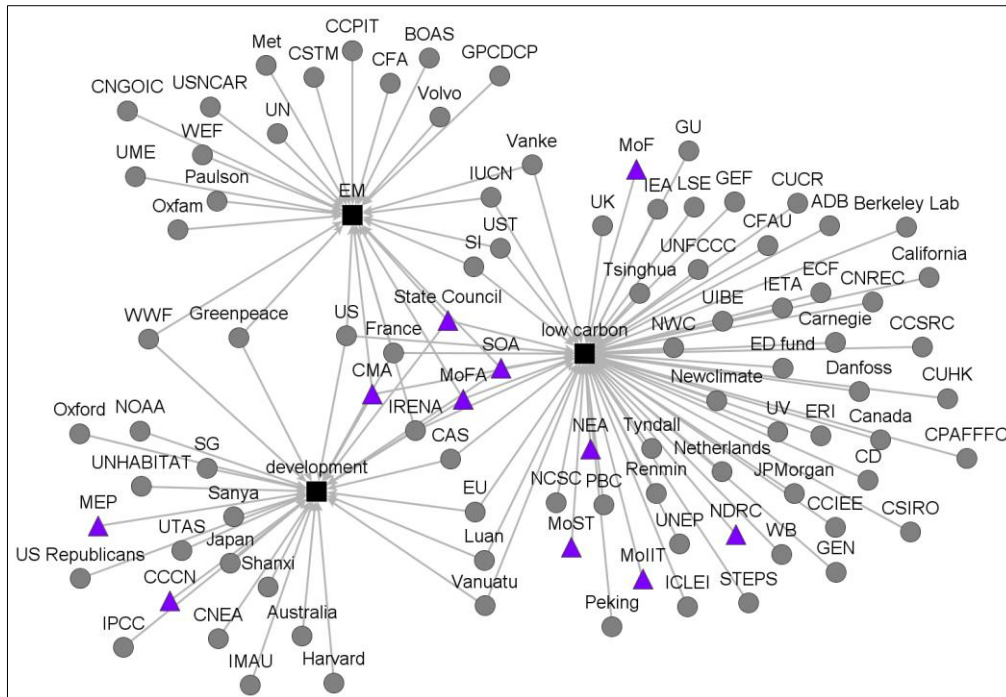
had been discursively replaced by the storyline ‘economic opportunity’ identified in the policy document. However, the reoccurrence of development in the central place of the constructed network was because *China Daily* cited various actors in expressing concerns about economic development and common positions among developing countries in the 2015 Paris climate change negotiations.

**Table 7.8 Storylines and key policy elements around 30<sup>th</sup> June, 2015 in *China Daily***

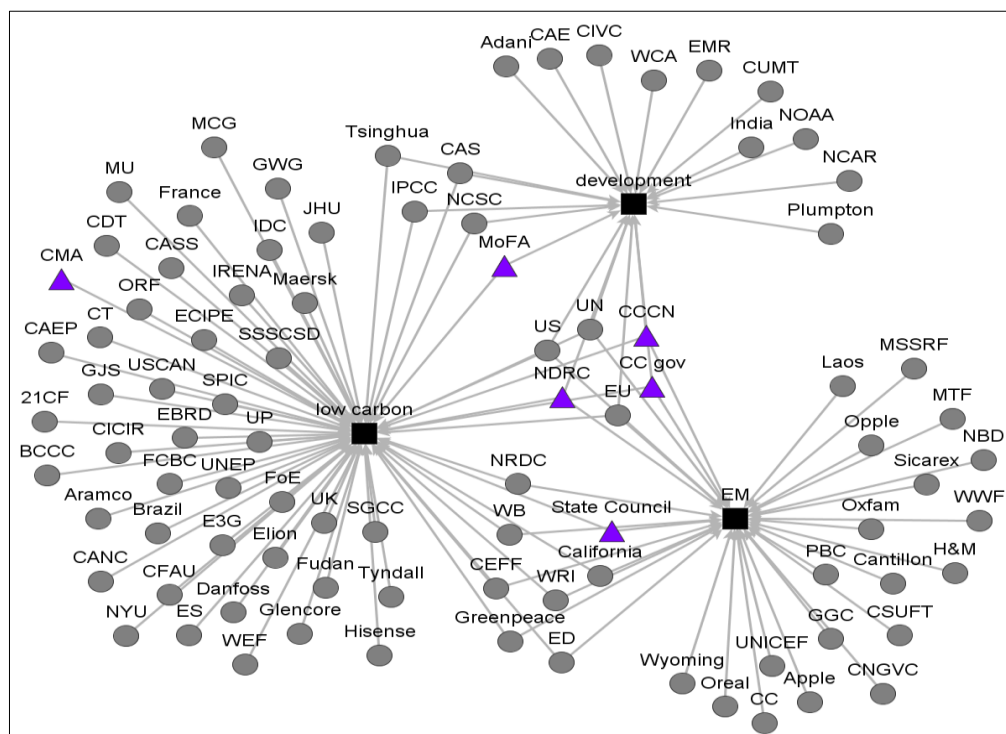
Dimension	Before the submission	The submission (30 <sup>th</sup> June, 2015)	After the submission
<b>Economy</b>	Economic opportunity	Economic opportunity	Development Economic opportunity
<b>Energy and emissions</b>	Low carbon energy Market Technology	Carbon sink Low carbon energy Market Technology Transparency	Low carbon energy  Transformation
<b>Public involvement</b>	Participation	Behaviour Participation	Participation
<b>Science and ecology</b>	Resilience Scientific certainty Surviving	Local Resilience	Local  Scientific certainty Surviving
<b>Responsibility</b>	China’s responsibility  Different responsibilities Major emitters	Developed countries’ responsibility Developing countries’ responsibility Different responsibilities	China’s responsibility Developed countries’ responsibility Developing countries’ responsibility Different responsibilities Major emitters

#### **7.4.4 *China Daily*: Dominant constructed discourse networks within the six months around the 2015 submission of INDCs of China**

The dominant discourse of low carbon can be identified in the constructed climate discourse networks in *China Daily* in 2015 (see Figure 7.15 and Figure 7.16).



**Figure 7.15** Main constructed climate discourses within the six months before 30<sup>th</sup> June, 2015 in *China Daily*



**Figure 7.16** Main constructed climate discourses within the six months after 30<sup>th</sup> June, 2015 in *China Daily*

Firstly, the majority of actors were clearly linked to the discourse of low carbon. Secondly, the notion was discursively institutionalised in the constructed network as it was linked to the majority of governmental actors.

However, the dominant discourse network of low carbon was identified to have links to the notions of development and ecological modernisation. Even in 2015, *China Daily* still constructed discourse networks based around the fundamental principles of development and historical responsibility for addressing climate change. A prominent example is that the EU and the US were cited to construct development discourse emphasising the different responsibilities between developed and developing countries (see Chapter 6).

It is worth noting that many actors within the low carbon discourse network were not cited to construct other discourses after the critical point in 2015 (see Figure 7.16). CMA was cited to construct the storyline 'developing resp' making a positive attitude towards the responsibility of developing countries in the coverage. Therefore, the notion of low carbon was identified to be well-structured and institutionalised among key governmental actors in the constructed climate change discourse in 2015.

#### **7.4.5 *Southern Weekend*: Constructed climate discourse network within the six months around the 2015 submission of INDCs of China**

The structure of the constructed climate change discourse network in *Southern Weekend* was very different to those in *Peoples' Daily* and *China Daily* (see Appendix F). This is because of a small number of articles identified in *Southern Weekend*. Only three articles can be identified with actors and storylines in the paper before the critical point. The constructed climate change discourse network was still very fragmented although less so than it had been earlier, within the six months after the critical point in *Southern Weekend*. The coverage constructed a concern about responsibility with storylines such as 'no target', 'developing resp' and 'developed resp' and the reality of climate change namely 'scientific certainty' and 'surviving'.

The main feature of climate change coverage in *Southern Weekend* can be demonstrated by the lack of similarity between storylines identified in the paper and key policy elements summarised from the document (see Table 7.9). This suggests

that *Southern Weekend* did not take the obligations of constructing the messages of climate change in accordance with governmental voices.

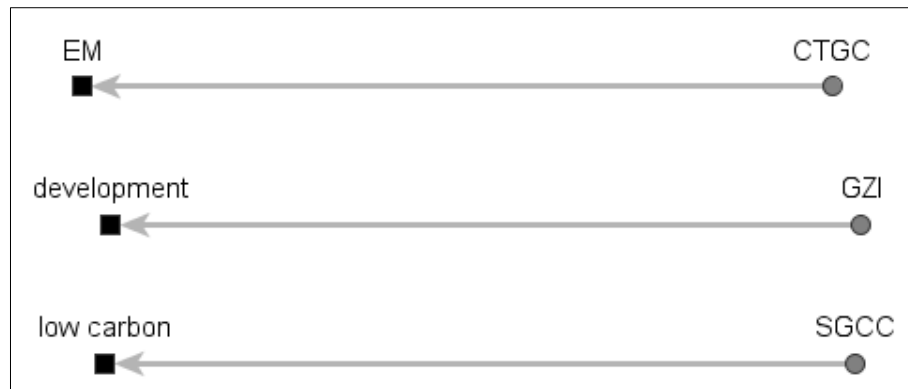
**Table 7.9 Storylines and key policy elements around 30<sup>th</sup> June, 2015 in *Southern Weekend***

Dimension	Before the submission	The submission (30 <sup>th</sup> June, 2015)	After the submission
<b>Economy</b>		Economic opportunity	
<b>Energy and emissions</b>	Low carbon energy	Carbon sink Low carbon energy Market Technology Transparency	
<b>Public involvement</b>		Behaviour Participation	
<b>Science and ecology</b>	Ecology  Surviving	Local Resilience	Scientific certainty Surviving
<b>Responsibility</b>		Developed countries' responsibility Developing countries' responsibility Different responsibilities	Developed countries responsibility Developing countries' responsibility

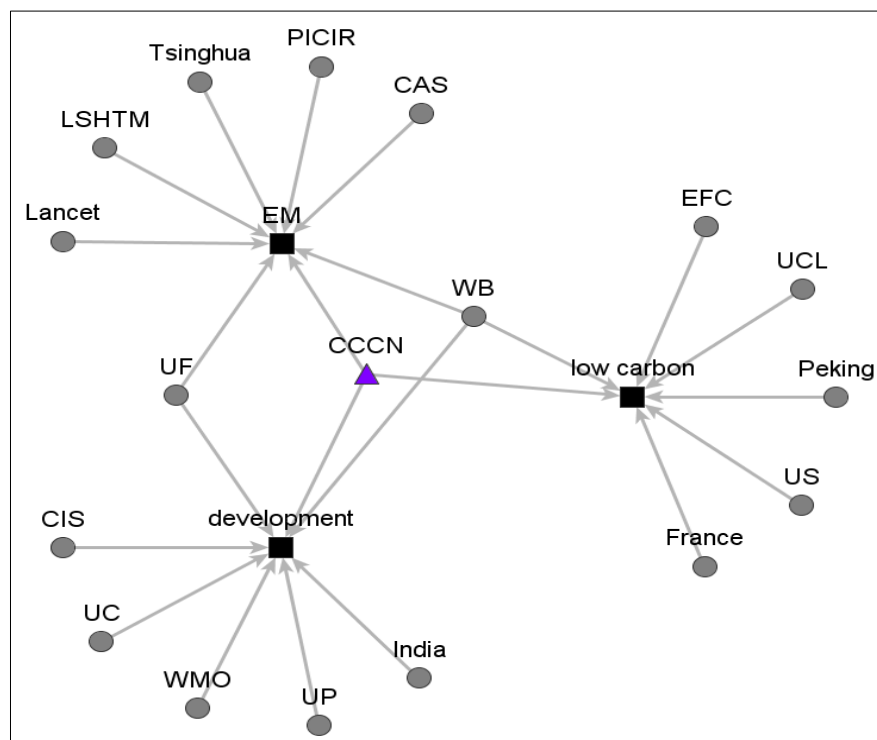
#### **7.4.6 *Southern Weekend*: Dominant constructed discourse networks within the six months around the 2015 submission of INDCs of China**

The structure of the constructed networks is very simple because of the small number of storylines. Therefore, there is no identified dominant discourse within the six months before the critical point in *Southern Weekend* (see Figure 7.17). After the critical point in 2015, in contrast to the dominant discourse 'low carbon' in *People's Daily* and *China Daily*, the main feature of the constructed network in *Southern Weekend* is a balance between three discourses (see Figure 7.18). Therefore, this feature demonstrates that the discourses in *Southern Weekend* were not necessarily constructed and structured in line with governmental voices and policy rhetoric.





**Figure 7.17 Main constructed climate discourses within the six months before 30<sup>th</sup> June, 2015 in *Southern Weekend***



**Figure 7.18 Main constructed climate discourses within the six months after 30<sup>th</sup> June, 2015 in *Southern Weekend***

## **7.5 Summary: Constructed discursive change in climate coverage from development to low carbon**

This PhD thesis examines the discursive change constructed in *People's Daily*, *China Daily* and *Southern Weekend* in 2007, 2009 and 2015. *People's Daily* constructs the centralised discourse around governmental actors. The constructed discourse changed in line with policy rhetoric because it is an official mouthpiece. *China Daily* is a national official newspaper, and it constructed the climate discourse, to some extent, around governmental voices. However, it constructed the

fragmented discourse around governmental actors with various storylines. This is because *China Daily* was identified as a relatively open paper. *Southern Weekend* is seen as a commercialised and relatively open paper. Not surprisingly, its discourse is not directly relevant to the policy rhetoric.

These three different types of newspapers demonstrate the different levels of the Chinese government and propaganda system utilising elements of the discourses of a range of actors to promote Chinese official discourses. Because *People's Daily* is a mouthpiece of the Chinese Central Government, it can be utilised to promote official positions through constructing the climate discourses of various actors in line with China's policy rhetoric. *China Daily*, being a national official paper, has such a similar feature of the constructed climate discourses. However, it is also a commercialised paper and it thus can be allowed to cite various actors and their voices beyond policy rhetoric. *Southern Weekend* received a weak level of Chinese central propaganda system. Therefore, the Chinese government has a weak control on *Southern Weekend* to construct climate discourse in line with policy rhetoric.

The constructed climate change discourse is not opposed to governmental voices. This is determined by the Chinese political and media system. Also, these papers even including *Southern Weekend*, to a great extent, constructed the discourse defending governmental positions. For example, those constructed storylines concerning development and responsibility refer to a constructed statement that China is a developing country without the obligation of reducing emissions and the ability to address climate change.

The discursive change in the coverage can be constructed around the evolution of the policy rhetoric. In 2007, the idea to build up the carbon market was identified as a very marginal storyline. However, the storyline concerning a national carbon market was not only constructed and structured in the networks but also it could be identified in the key elements of the policy documents in 2015.

Drawing on the discourse network analysis of climate change coverage in newspapers in China, the next chapter will address research questions discussing how the newspapers discursively construct climate change discourse networks and reviewing other works around environmental and climate change discourse and coverage in China.

## Chapter 8: Discussion

Drawing on Chapters 5, 6 and 7, this chapter addresses the central and key research questions clarified in the Introduction and discusses the dynamic constructed climate change discourses in *People's Daily*, *China Daily* and *Southern Weekend*. Section 8.1 identifies and explains three constructed discourses, namely development, ecological modernisation (EM) and low carbon in the coverage. Section 8.2 looks at how various social actors have been cited in the coverage. Section 8.3 explains constructed *discursive structuration* and *discursive institutionalisation* identified in the discourse networks of the newspapers. Section 8.4 discusses the similarities and differences between the constructed climate discourse of the newspapers and policy rhetoric. It shows to what extent climate policy rhetoric can be identified in the constructed discourse across the three newspapers. Section 8.5 explains the nature of the dominant discourse networks constructed by different newspapers. Section 8.6 aims to answer the central question with a discussion on the nature of dynamic constructed climate change discourses and various actors cited in the coverage across the three newspapers.

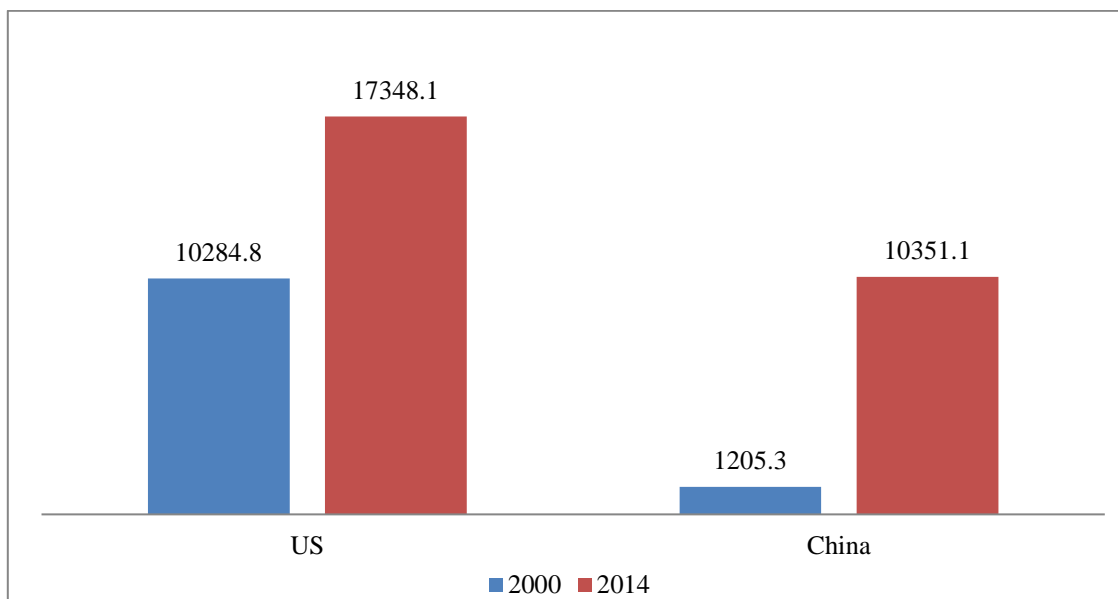
### 8.1 Dominant constructed climate change discourses

- Do the dominant constructed climate change discourses identified in the coverage vary across newspapers? If so, what are they? In what way do they vary?

As explained in Chapter 5, this PhD thesis identifies three dominant constructed discourses in 2007, 2009 and 2015 respectively. As explained in Chapter 7, the identification of the main discourses depends on how the newspapers construct the dominant discourse networks. In order to fit it to be identified as a dominant constructed discourse, it must have two features. Firstly, the dominant discourse must be structured with a link to a wide range of actors in the constructed networks. Secondly, the dominant discourse must be constructed to be linked to the majority of the governmental actors in the networks. According to this criteria and procedure of identification, Section 8.1.4 reveals that the dominant constructed discourses vary across the newspapers.

### 8.1.1 Development

First of all, as discussed in Chapter 1, to the Chinese government, economic development is the fundamental principle of addressing climate change and the priority of national affairs (Zhang, 2003 pp. 66-68). Not surprisingly, China's priority for economic growth is demonstrated by the fact that its economic level was much lower than that of the US even in 2000 (see Figure 8.1). More importantly, China was far behind developed countries such as the US and Japan and was slightly higher than India in 2000 in terms of per capita GDP (see Table 8.1).



**Figure 8. 1 Gross Domestic Product (GDP) of China and US in 2000 and 2014 (US\$)**

Source From: (WorldBank, 2016)

As revealed in Chapter 1, the Chinese government has to maintain political stability with rapid economic growth and poverty eradication (Held et al., 2011 pp. 10-11). With an authoritarian political system, China has to show its ability to govern the country, manage economic activities and raise the level of the standard of living. Lieberthal et al. (2009 pp. 30-32) believe that maintaining political and social stability requires a high GDP growth rate. Therefore, taking action on emissions reduction should not negatively influence economic growth.

With its rapid economic growth, China became the second biggest economy in the world. Because of the tremendous economic achievement of China, the world no longer sees China as a poor developing country. This indicates why the storyline

‘development’, as discussed in Chapter 5, had declined in the constructed climate discourses across the newspapers in 2015.

However, the storyline ‘development’ remained identified as an important statement linked to governmental actors in the constructed network in 2015. Although China witnessed rapid economic growth, its per capita GDP remained much lower than those of major economies such as the US and Japan (see Table 8.1). Therefore, the storyline ‘development’ was identified clearly in the constructed discourse even in 2015.

**Table 8. 1 GDP per capita (current US\$) of the US, Japan, China and India in 2000 and 2014**

<b>Country \ Year</b>	<b>2000</b>	<b>2014</b>
<b>The US</b>	36,449.9	54,398.5
<b>Japan</b>	37,299.6	36,152.7
<b>China</b>	954.6	7,587.3
<b>India</b>	452.4	1,576.8

Source From: (WorldBank, 2016)

Secondly, due to rapid economic growth, energy challenge is another important consideration for development (see section 1.3, Chapter 1). As Gallagher (2007 p. 390) explains, rapid economic growth relies on acquiring and consuming natural resources such as coal. For this reason, access to and the utilisation of natural resources is seen as a fundamental principle of national sovereignty (Yu, 2008 p. 143) and the rights of development in international climate change negotiations (Zhang, 2003 p. 82). Therefore, climate change issues are discursively linked to the rights of utilising natural resources and consuming energy (Lo, 2015a p. 10). As discussed in Chapter 5, the three newspapers had constructed the storylines ‘energy consumption’ clearly in the climate coverage particularly in 2007.

Also, another energy challenge is China’s recognition of the difficulties in reducing the dominance of coal in the energy mix. As identified in Chapter 1, in 2006, burning coal contributed to nearly 70% of total energy consumption in China (Marks, 2010 p. 974). As discussed in Chapter 5, improving the energy mix of China does not explicitly mean controlling and restricting the use of coal. This explains why the

storyline 'energy mix' was categorised in the discourse 'development' and was identified to be centralised in the constructed climate change discourse networks particularly in 2007 (see Chapter 7).

Thirdly, as discussed in Chapter 1, climate change is recognised as a real problem and risk in China (Wu, 2009 p. 172, Schröder, 2011 p. 21). While a view of scientific uncertainty of climate change can be identified in the coverage in 2009, it was far behind the mainstream voice in China (see Chapter 5). China made an effort to raise public awareness and education regarding climate change and environmental protection. However, as discussed in Chapter 5, the climate coverage can construct environmental protection and public awareness as the recognition of and education about climate change rather than the implementation of taking action and changing lifestyles. Therefore, this can explain why the storylines 'research', 'scientific certainty', 'uncertainty', 'ecology' and 'public awareness' are categorised into the discourse 'development'.

Fourthly, as discussed in Chapter 1 and 5, the constructed discourse of development reflects different historical responsibilities for addressing climate change. China categorises itself as a developing country with its low capita economic growth. Also, China is engaged in emphasising the principle of common but differentiated responsibilities because the arrangements of the UNFCCC and the Kyoto Protocol provide the rights of acquiring financial and technological support from developed countries for developing countries.

As revealed in Chapter 7, it is worth noting that the discourse of development has never been disconnected from the Chinese government and a wide range of non-state actors represented in the constructed discourse networks. Although the constructed climate change discourse has evolved over time, economic development and different responsibilities remain to be identifiable as key storylines identified in newspaper coverage. However, it is a fact that with the growth of the constructed notions of ecological modernisation and low carbon, the discourse of development has lost its dominant status in the constructed discourse network of climate coverage particularly in 2015.

### **8.1.2 Ecological modernisation**

The notion of ecological modernisation (EM) is seen as an important discourse in terms of discussions on climate change in Chinese newspapers and key policy documents. Based on the findings from Chapter 5, the discourse of ecological modernisation can be constructed and identified to consist of a set of storylines concerning technology, transformation, ecological concern and economic tools in the context of China. As discussed in Chapter 4, my work labels the ecological modernisation discourse based on the existing literature and the context of China. On the one hand, this PhD research recognises other plausible interpretations of the EM discourse. On the other hand, it does not necessarily coincide with other interpretations. Buttel (2000 pp. 58-59) believes that the notion of ecological modernisation can be interpreted in different ways. There is a fundamental difference between objectivist and social constructionist approaches to the notion of ecological modernisation (Toke, 2011 p. 64). As I argued in Chapter 3, my thesis does not take an objective assessment of measuring EM but it argues that the notion can be socially constructed and discursively constructed by the newspapers in the climate change coverage of China.

It is very important to discuss the fundamental difference between sustainable development and ecological modernisation. Certainly, the discussion on the difference is based on their different interpretations and definitions rather than so-called objective criteria. Firstly, the concept of sustainable development focuses on development with the purpose of meeting basic needs. As discussed in Chapter 5, in the constructed climate discourse, development is discursively linked to the justice of poverty eradication and the rights of economic development among poor countries. However, ecological modernisation looks at simultaneous progress in economic growth and environment protection fixing existing social and economic systems such as economic policies and industrial transformation. Secondly, with an emphasis on global and intergenerational justice, the concept of sustainable development refers to a close link between the North-South divide and the responsibility for addressing environmental issues (Langhelle, 2000). In this sense, China does not have historical responsibility for reducing emissions especially because it is labelled as a developing country in terms of addressing climate change. Therefore, the concept of sustainable

development is fundamentally different to the notion of ecological modernisation, and it is categorised into the discourse of development (see Chapter 4 and 5).

Based on Chapter 5, there are three important features of the notion of ecological modernisation (EM) in the constructed climate change discourse of China. First, the development of technology is identified as a key storyline in the discourse of EM. Even in 2007, an idea to develop advanced technologies for addressing climate change was well-structured in the constructed climate discourse networks in the coverage and was identified in the policy rhetoric. This is because technologies, particularly including carbon capture and storage, can, in theory, be employed to fix climate problems rather than simply boost economic development.

Second, economic policies and tools and industrial transformation are identified in the constructed discourse. The discourse of EM emphasises the unsustainability of the current development pattern. As Toke (2017) reveals, China will adjust its economic and industrial structure to face a modest economic growth. Therefore, transformation, such as upgrading industrial structures and closing coal plants, is used to secure economic sustainability rather than simply prioritise development. As discussed in Chapter 5, various economic indicators and tools such as pricing natural resources can be identified in the constructed climate discourse (Mol and Carter, 2006 p. 158).

Third, the notion of ecological modernisation highlights the urgency of addressing environmental issues and the importance of changing lifestyles. With the rise of environmental degradation and public concern about air pollution, the climate coverage constructed the importance of emissions reduction and the seriousness of climate change.

### **8.1.3 Low carbon**

The notion of low carbon has been constructed to be emerging as a climate discourse especially since 2005 with a focus on economy and technology (Nerlich, 2012 p. 43). In this sense, the newspapers have cited a wide range of actors in constructing and interpreting climate change issues as an important opportunity for business and investment in the constructed discourse networks. This discourse does not consider the dichotomy of economic growth and emission reduction. Rather,



addressing climate change is discursively constructed in the coverage as a motivation for economic growth.

Also, the low carbon discourse focuses on building the national carbon market and low carbon energy systems such as the smart grid and enhancing climate resilience such as resilient cities. Since 2009 and particularly 2010, the low carbon discourse has become a key part of the discussions on climate change in China (Ellermann, 2013 p. 78).

Another important feature of the low carbon discourse is the responsibility of China, developing countries and major emitters. Compared to 'development' and 'ecological modernisation', the low carbon discourse reflects the responsibility for controlling coal and reaching a carbon peak. In the constructed discourse, the main discursive motivation for China's change in the responsibility for reducing emissions is international pressure on major economies and emitters, particularly China. Without the proactive and substantial participation of China, weak global action cannot stabilise the climate system (Harris et al., 2013 p. 293). In 2011, China was the biggest GHG emitter followed by the US and the EU and was far ahead of other developing countries such as India (WRI, 2014). In 2011, China's level of per capita emissions was nearly that of the EU and was slightly higher than the global average level (WRI, 2014). Therefore, a call for China and other major emitters to take the responsibility for reducing emissions has been constructed and identified to emerge in the climate change discourse of the newspapers particularly in 2015.

#### **8.1.4 Dynamic approach to the dominant constructed discourses across three newspapers**

This PhD thesis employs a social constructionist perspective for understanding the dynamic constructed climate change discourse identified across the three newspapers. Generally speaking, as the mouthpiece, *People's Daily* constructs discursive consistency identified in the coverage around the critical points (see Chapter 7).

Similarly, *China Daily* constructs to some degree the discursive consistency around the critical points. However, within the six months after the critical point in 2009, a wide range of actors, on the one hand, were cited in the coverage being linked to

policy options such as the utilisation of technology and economic transformation embracing the EM discourse. On the other hand, they were cited as news sources for defending China's policies and positions such as economic priority especially during and after the Copenhagen conference in the coverage.

In *Southern Weekend*, the year 2007 witnessed the constructed discursive consistency in the dominance of development. This is because many storylines under the discourses of ecological modernisation and low carbon did not substantially emerge in the constructed networks in 2007 (see Chapter 7). Differently to *China Daily* and *People's Daily*, *Southern Weekend* constructed its discursive evolution which is obviously not relevant to policy rhetoric. It is worth noting that *Southern Weekend* constructed three competing discourses and even included 'development' after the critical point in 2015.

**Table 8.2 Dominant discourses in *People's Daily*, *China Daily* and *Southern Weekend* within the six months before and after the critical points in 2007, 2009 and 2015**

Newspaper Year		<i>People's Daily</i>	<i>China Daily</i>	<i>Southern Weekend</i>
2007	Before	Development	Development	Development
	After	Development	Development	Development
2009	Before	EM	EM	Development, EM and low carbon
	After	EM	Development and EM	EM
2015	Before	Low carbon	Low carbon	Not identified
	After	Low carbon	Low carbon	Development, EM and low carbon

Based on the findings of Chapter 5 and Chapter 7, the dominant climate change discourses in *People's Daily* can be constructed and identified as development, ecological modernisation and low carbon in 2007, 2009 and 2015 respectively (see Table 8.2). In 2007, the discourse 'development' was highly constructed and structured across the three newspapers. This is because the Chinese discursive insistence on the importance of economic development and different historical responsibilities constructed and identified in the coverage.

In 2009, while the discourse of development was not abandoned and was even clearly constructed and structured in *China Daily* and *Southern Weekend*, the notion of ecological modernisation was identified as the dominant discourse in the constructed networks. Basically, this discursive change reflects the evolution of the constructed climate change discourse. Before the announcement of the target of carbon intensity in 2009, a wide range of actors including governmental bodies had been cited to be linked to the storylines ‘transformation’, ‘economic tools’, ‘behaviour’ and ‘surviving’ in the constructed discourse networks (see Chapter 7).

In 2015, the policy rhetoric of China’s INDC submission clearly showed the rise of the discourse of low carbon such as the low carbon economic opportunity, carbon market, carbon peak and resilience. Clearly, in *People’s Daily* and *China Daily*, the change in the dominant constructed climate change discourse can, to a greater or lesser context, be observed around the evolution of policy rhetoric in the coverage. This is because they are labelled as official newspapers. However, Table 8.2 shows a sharp difference of *Southern Weekend* to other newspapers. This is as expected given that *Southern Weekend* is identified as a highly-marketised paper and thus it does not necessarily construct its climate discourse strongly around policy rhetoric in the coverage.

## **8.2 Various social actors represented in the constructed climate change discourse networks of the coverage**

- To what extent have various actors been cited and particularly been selected to derive the legitimacy of governmental positions in climate coverage across the three newspapers?

This PhD thesis made a contribution to the discovery of various actors represented in the constructed climate change discourse networks in newspapers in China. As explained in Chapter 3, it confirms the views from Eberhardt (2015 p. 49) and Ellermann (2013 p. 5) that non-state actors particularly including NGOs can be identified in the constructed climate change discourse of China particularly in newspapers. Based on the findings from Chapter 6 and Chapter 7, this section explains why my work borrows the key elements of the discourse-coalitions approach to understand dynamic constructed climate change discourses and discourse networks in the coverage.

### 8.2.1 Storylines, actors and discourse networks

As explained in Chapter 3, the central contribution of this thesis is borrowing the key elements of the approach made by Hajer (1995) namely storylines, actors (claim-makers) and dominant discourses and networks to analyse the dynamic constructed climate change discourses in newspapers in China. Also, this PhD work considers the theoretical travelling of the approach applied to the case of China. Firstly, China is an authoritarian political system which is fundamentally different to the Western democratic countries. In this sense, fierce political debates in the Western countries cannot be identified in the public discursive space in China. Secondly, this PhD thesis looks at the constructed climate change discourse in the newspapers rather than in the real political world. Storylines refer to statements and concepts in the news quotations constructed and identified in coverage. Actors are seen as news sources cited in the newspapers. Constructed discourse networks are used to map links between storylines constructed in and actors cited in the climate coverage. Therefore, the key elements are borrowed by my work to reveal how the newspapers have constructed climate change discourse and discourse networks in the coverage in China over time.

Based on the findings from Chapter 6 and Chapter 7, this PhD thesis confirms that various social actors have been represented in the constructed climate change discourse networks across the three newspapers. The findings show that business actors have been cited to interpret climate change issues differently in the constructed discourse. For example, BP and Greenergy were cited to support the storyline 'economic opportunity' in the constructed networks of *China Daily*. BP is a company with investments in natural gas and oil and Greenergy looks at the biofuels energy. Apparently, they have fundamentally different economic investments. However, in the constructed discourse, these two actors were cited and identified to converge on the storyline with their focus on investments in low carbon energy. For this reason, a wide range of actors were cited to support the storyline 'economic opportunity' in the constructed networks. Conversely, having been linked to the storyline 'development', some business actors were not cited to support the positive climate solutions in the coverage. For example, CIVC, the Interprofessional Champagne Wines Committee in France, was cited as a news source for emphasising that the rising temperature could contribute to the high quality of its

wine products, which was identified in *China Daily* in 2015. Therefore, to what extent different social actors were related to the constructed climate change discourses depends on how the newspapers represent them to interpret the issues.

Environmental non-governmental organisations (NGOs) are another important example for demonstrating how the actors can be cited in expressing various ideas in the climate coverage. Not surprisingly, environmental NGOs have similar emphasis on environmental protection and addressing climate change. However, they have been cited to construct different interpretations and understandings of climate-related issues in the constructed networks. For example, as discussed in Chapter 2, Greenpeace is a renowned global environmental NGO and successfully receive international media attention. Chapter 6 reveals that the Greenpeace is concerned about the urgency of climate change and raises the importance of 'low carbon energy' in its official documents. However, as discussed in Chapter 7, it has been cited to construct the development discourse in the coverage particularly in *China Daily*. This is mainly because Greenpeace has been cited a news source for emphasising the climate justice and blaming developed countries for historical responsibility for emissions reduction in the constructed discourse. As revealed in Chapter 6, it is worth noting that the environmental NGOs could not be cited to strongly criticise the Chinese governmental action on addressing climate change. Certainly, this is because their voices and ideas are, to a great extent, determined, selected and filtered by the newspapers. Interviewing these actors would help, to an extent, overcome these problems although this was not the main aim of this present research.

### **8.2.2 Being aligned with governmental actors in the constructed discourse**

As explained in Chapter 3, various actors can be cited to construct a discourse network by being linked to a discourse. In this sense, non-state actors and governmental bodies can be cited to be linked to a same set of storylines in the coverage. As discussed in Chapter 2, due to the political and media system of China, it is reasonable to assume that the newspapers cannot represent non-state actors to challenge and criticise the fundamental principles and positions of the Chinese government in the coverage.

Firstly, these non-state actors can be linked to a storyline with governmental bodies in the constructed discourse network. For example, *People's Daily* cited an official from the UNFCCC to construct the importance of the rights and interests of developing countries in addressing climate change in September, 2009. For this reason, this actor was cited to be aligned with the majority of governmental bodies via its links to the storyline 'development' in the constructed network.

Secondly, some non-state actors like academic institutions in China are represented to have similar ideas with governmental actors in the constructed discourse. In the network, the Chinese Academy of Sciences (CAS) was cited to support the storyline 'development' emphasising the unfairness for developing countries to undertake the equal responsibility for reducing emissions. It is important to note that Chinese academic institutions are largely funded by the Chinese government and serve as official think tanks (Hart et al., 2014 p. 14). It is not easy for these academic actors to challenge governmental discourses, and even if they did, the newspapers would be constrained to report such criticisms.

Thirdly, it is quite surprising that some NGOs such as Oxfam can be found in the mouthpiece particularly like *People's Daily*. The climate coverage cited Oxfam to construct the rights of developing countries and the obligations of developed countries..

Also, it is important to note that these non-state actors have to be cited to express their views along the so-called political correctness of China. As discussed in Chapter 1 and Chapter 2, they remained limited in public discursive space in China due to the political system.

### **8.2.3 Competing with governmental actors in the constructed discourse**

As explained in Chapter 3, actors can not only be linked to a discourse but also can discursively compete with each other (Hajer, 1995 pp. 58-59, Hajer, 2009 p. 60, Metze and Dodge, 2016 p. 3). Although these non-state actors and the key governmental bodies can be cited to agree with each other in the constructed discourse, the newspapers can, to a greater or lesser extent, constructed discursive competition between them in the coverage. This finding challenges the statement made by Xie (2011 p. 207) that NGOs have been cited to have limited capability to make sense of environmental affairs in China. As revealed in Chapter 2, the

environmental NGOs were cited more frequently as climate-related news sources than governmental officials. Therefore, they are important news sources in terms of climate coverage of China.

As discussed in Chapter 7, while the Chinese governmental actors were cited as news sources for defending the fundamental principles of economic development and historical responsibility in the climate coverage, a wide range of non-state actors were linked to the storylines ‘major emitters’ and ‘China resp’ even in *People’s Daily*. For example, in the constructed discourse in 2009, Chinese academia were cited to raise the role and responsibility of China. Although the storyline ‘China resp’ was very marginal in the network in *People’s Daily* even in 2009, a professor of the Renmin University of China (Renmin) was cited to construct an important fact that China’s per capita emissions were approaching to the average level of the world. This demonstrates that the non-state actors have not necessarily been represented to agree with governmental actors and policy rhetoric in the constructed discourse networks.

However, the main feature of the constructed discursive competition between governmental positions and non-state actors is raising implications for the responsibility rather than making direct criticism of China’s weak action on climate change in the constructed coverage. This is mainly because the newspapers cannot directly challenge official voices in China.

### **8.3 Constructed discursive structuration and institutionalisation identified in the climate change coverage**

Based on the findings from Chapter 7, this section addresses two research questions concerning *constructed discursive structuration* and *constructed discursive institutionalisation* identified in the discourse networks across the newspapers.

- How have constructed climate change discourses been structured in the coverage across newspapers?

As explained in Chapter 3, discourse can be identified to be dominant in the process of constructing ideas and options (Hajer, 1993 p. 46, Hajer and Laws, 2006). In this PhD thesis, *constructed discursive structuration* refers to the processes of how the newspapers have constructed climate change issues and cited various actors in their

coverage. For this reason, this PhD research reveals the rise and fall of storylines constructed and identified in the climate change coverage.

- How have constructed climate change discourses been institutionalised in the coverage across newspapers?

On the basis of the constructed discursive structuration, constructed discursive institutionalisation refers to how the newspapers have constructed the dominance and adoption of the climate change discourse and cited governmental actors in the discourse networks.

### **8.3.1 From development to economic opportunity**

As discussed in Chapter 1, the economy is a key discursive element of climate change issues in China. This thesis reveals the fundamental difference between economic development and economic opportunity in the constructed climate change discourse. It is well recognised that economic development is constructed to be the national priority beyond addressing climate change in the coverage of China. However, as discussed in Chapter 5, economic opportunity refers to a close link between business, job and commercial opportunities and addressing climate change. Also, it means a concern about economic activities negatively affected by climate change.

As shown in Chapter 7, the newspapers cited Chinese governmental actors to raise economic development and poverty eradication in the constructed climate discourse. However, with increased recognition of climate problems, various actors were cited to construct a concern about the negative effects on economic activities and growth in the constructed networks. Also, the low carbon and green economy had been identified to emerge in the constructed discourse. Firstly, the idea for the low carbon economy does not simply mean limits to economic growth. In this sense, the Chinese governmental bodies could be cited to support this idea relatively easily. Secondly, as revealed in Chapter 6, non-state actors particularly business actors were cited to favour economic opportunity. Thirdly, environmental non-governmental organisations such as the Climate Group were cited to support the idea of the low carbon economy in the constructed discourse of the coverage. Therefore, economic opportunity and emissions reduction were identified to converge on the discourse of low carbon in the coverage particularly in 2015.



Although economic opportunity was not identified as a marginal storyline in the constructed climate discourse network even in *People's Daily* and *China Daily* in 2007, it was not clearly linked to the key governmental actors until in 2009. This demonstrates that the newspapers started to construct the importance of the green and low carbon economy in 2009 when the Copenhagen conference was held.

### **8.3.2 From heavy dependence on coal to low carbon energy**

There have been three features of the energy dimension in the constructed climate change discourses in the newspapers. Firstly, the construction of a low carbon energy system became an important storyline identified in the constructed discourse particularly in 2015. The development of advanced technologies including carbon capture and storage (CCS) and the smart grid can be utilised to support the low carbon energy system.

Secondly, a promise of a carbon peak is constructed to be a positive attitude towards addressing climate change. In the constructed discourse networks, the earliest statement concerning the carbon peak was linked to a professor of Tsinghua University (Tsinghua) in July, 2009 in *China Daily*. The professor was cited to predict that China would reach a carbon peak by 2035. Following this, in August 2009, a researcher of the Energy Research Institute (ERI) under the NDRC was cited for supporting a carbon peak reached in 2030. A professor of Peking University (Peking) even was identified in the coverage in May 2010 stating that China would reach the peak by 2025. These three statements were found in *China Daily* around the critical point in 2009. This demonstrates that *China Daily* can construct a wider discursive space for discussing climate-related issues. However, the storyline 'low carbon energy' was not linked a wide range of actors cited across the newspapers until in 2015 when the Chinese government clarified the target of a carbon peak in its official document. In November, 2014, the Chinese President Xi made a promise to achieve the peak of carbon emissions by 2030 (Green and Stern, 2016 p. 2). Therefore, the year 2015 witnessed the rise of the storyline 'low carbon energy' in the constructed climate change discourse of China.

Thirdly, controlling coal consumption becomes an important storyline in the constructed climate discourse in China. For example, in January 2007, an official of the IEA was cited to state that coal would remain an important source of energy in

*China Daily*. Clean coal and coal gasification were constructed as important solutions to climate change identified in the coverage. This means that the consumption of coal remained unchanged in the constructed discourse. However, the Chinese governmental bodies were cited to construct the storyline about controlling coal consumption particularly in 2015. This is largely due to increasing public concern about air pollution and a shift in China's role in addressing climate change (McMullen-Laird et al., 2015). Controlling coal consumption can exert synergistic effects in terms of improving air pollution and addressing climate change.

The newspapers constructed opening the carbon market in China as another step towards a low carbon society in their climate coverage. This is because the core element of carbon trading and market is imposing an emission cap. There is a contrast between storylines 'no cap' and 'market'. As discussed in Chapter 5, discursive resistance to carbon trading and emission caps can be constructed and found in the coverage in 2007 and 2009 across the newspapers. Particularly, the US and the NDRC were cited to support the same storyline before the critical point in the constructed discourse in 2007. They were cited to construct discursive resistance to emission caps. However, the storyline 'market' was identified to emerge from a marginal role in 2007 to a popular idea in 2015 in the constructed climate change discourse networks of China. The coverage reported that the NDRC announced an initiative of a national carbon market in China in 2015. This is based on the implementations of several pilot carbon trading projects started and approved by the Chinese government in 2011 (Lo, 2015a p. 3).

### **8.3.3 From realisation to action**

It is reassuring to know that the constructed discourse tends to raise public awareness of climate change and recognise threats to human survival and even national security. In the coverage of *China Daily* in 2007, WWF was cited to construct the storyline 'surviving' in the constructed network stressing the main concern about the water supply and security under the threat of climate change. In February, 2007, the MoST was even cited to raise the safety and security of coastal cities in China caused by the rise of sea levels.

As discussed in Chapter 5, a major difference to 'awareness' and 'behaviour' is that the storyline 'participation' focuses on a broad public involvement in addressing

climate change. Firstly, the storyline refers to public participation in addressing climate change. For example, in September, 2009, the UNEP was cited to support the storyline 'participation' calling for people to participate in the Global Tree Planting Campaign and encouraging international society to reach an agreement in the Copenhagen climate change conference.

Secondly, the newspapers constructed the participation of NGOs in addressing climate change in China in coverage. As discussed in Chapter 1, these NGOs can provide professional knowledge to raise public awareness and education of climate risks. Also, as revealed in Chapter 6, a wide range of environmental NGOs such as WWF and Greenpeace were cited in the climate coverage of China. However, this does not mean that the Chinese government is tolerant of a wide variety of environmental movements, particularly involving protests and demonstrations. Under the leadership of President Xi, the Chinese government has exercised strict governmental control over NGOs affecting even more than 7000 foreign organisations in China (Wong, 2016). This contrast demonstrates that while public participation has been discursively emerging in the constructed discourse, environmental movements remain constructed to be very limited in the discursive space of China (Xie, 2011 p. 207).

Thirdly, the participation of business actors is seen as an important element of the storyline 'participation'. Corporate Social Responsibility (CSR) was linked to business actors in the mediated climate change discourse even in 2007. The Ministry of Commerce (MoCom) was cited to express the importance of CSR in addressing climate change and emphasising the action of emission reduction in the private sectors.

In addition to public participation, urban resilience reflects another dimension of action to address climate change. The prominent example of resilience is urban flood prevention. President Xi (CC gov) was cited to emphasise the importance of disaster prevention, climate resilient agriculture and low carbon smart cities during the opening ceremony of the Paris climate change conference in December, 2015. With the rise of climate risks, resilience is constructed and identified as a very realistic option as extreme weather might happen more frequently.

### **8.3.4 From different responsibilities to common commitment**

The principle of common but differentiated responsibilities is not only an important element of the UNFCCC and the Kyoto Protocol but also it is firmly insisted upon by the Chinese government. It is reasonable to assume that the US-China joint commitment to emission reduction made a contribution to the success in the establishment of the Paris Climate Change Agreement. This PhD thesis reveals how China's fundamental position on the responsibility for climate change has been discursively constructed and evolved in the coverage.

The newspapers had constructed a slight change in the fundamental principle of common but differentiated responsibilities in the coverage since 2009. In *China Daily* in 2009, Chinese Premier Wen Jiabao (State Council) was cited to urge developing countries to take a positive step to address climate change. More importantly, in *China Daily* in 2015, Chinese President Xi (CC gov) stated that the principle of common but differentiated responsibilities did not mean that developing countries could shirk their responsibilities for addressing climate change. This discursive shift is mainly because the developing countries such as China and India were constructed and identified as emerging economies and major greenhouse gases emitters.

## **8.4 Constructed climate change discourse and policy rhetoric**

- What are the similarities and differences between the constructed climate change discourses in newspapers and the climate policy rhetoric?

This section addresses the research question focusing on associations between constructed climate change discourse and policy rhetoric. As discussed in Chapter 3, the newspapers discourse cannot directly and decisively influence policy rhetoric particularly in China. Therefore, this PhD thesis looks at the similarities and differences between the constructed discourse and policy rhetoric around the identified critical points. Also, due to the political and media system of China, my work discusses to what extent the climate policy rhetoric can be repeated in the three newspapers differently.

#### **8.4.1 Relationships between constructed climate discourses and policy rhetoric**

Firstly, as stated in Chapter 7, the constructed discourse, particularly in the commercialised papers, did not necessarily change in line with policy rhetoric. The prominent example is the rise of the low carbon economy in the constructed climate change discourse. The constructed notion of the low carbon economy was identified to emerge in 2007 and be linked to a wide range of actors including governmental bodies cited in 2009 particularly in *China Daily*. However, the notion had not been reflected in key climate policy documents and rhetoric until 2015 when the low carbon growth became an important governmental measure clarified in China's INDCs document. The constructed storyline could be identified in the coverage prior to the governmental announcement.

Secondly, as revealed in Chapter 7, the constructed discourse particularly in the official newspapers can be identified to evolve around the development of policy rhetoric. Due to the political and media system of China, policy rhetoric secures the stability of the fundamental principles of addressing climate change identified in the coverage. As explained in Chapter 5 and Chapter 7, even in 2015, the climate change discourse of the newspapers still constructed the fundamental principles of different responsibilities and economic development in the coverage.

#### **8.4.2 Low carbon politics**

Based on the findings from the newspapers, in 2009, then Chinese President Hu Jintao was cited to describe addressing climate change as a new opportunity for economic growth; a green, low carbon and circular economy; green development and sustainable growth; and, in 2015, the Chinese President Xi Jinping was cited to interpret addressing the issues as a significant opportunity for transformation and low carbon development path. This demonstrates that the constructed climate change discourse of China has shifted to a practical and economic path.

The development of the constructed discourse and policy rhetoric can be understood in a wider social context. As explained in Chapter 1, the main feature of energy mix is China's heavy dependence on coal. With China's insistence on economic priority, a wide range of actors particularly including governmental bodies were cited to be concerned about an attempt to limit coal consumption. This is because controlling

the use of coal raised a considerable concern about energy security. As discussed in Chapter 1, China worried about the loss of its rights of access to natural resources and it was concerned that Western countries could utilise climate change to control and constrain China to utilise its resources (Held et al., 2011 pp. 19-20). This concern was raised by China in the beginning of the negotiations of the UNFCCC reflecting the fundamental position on securing national sovereignty. Also, rapid economic growth relies mainly on an insane amount of energy consumption (Gallagher, 2007 p. 390, Heggelund et al., 2010). For this reason, substantial action on energy conservation and emissions reduction could jeopardise economic growth. However, with a sharp increase in energy consumption, energy supply and even shortage became an important factor affecting climate policy rhetoric (Downs, 2006 pp. 13-14, Held et al., 2011 pp. 12-16). China has been witnessing a widening gap between energy consumption and domestic production and supply in terms of oil and natural gas especially since the 1990s (Zhang, 2015 pp. 77-78). Therefore, with an increase in concern about energy supply, controlling the consumption of coal was identified as an important policy option in the official document in 2015.

In addition to energy security, environmental concern and air pollution can be understood as an important contribution to the discursive emergence of the low carbon energy in the constructed discourse and policy rhetoric. Since 2011, the public awareness of air pollution has been increased with wide attention to PM 2.5 which is recognised as an indicator of pollutants. Burning coal does not only make a contribution to air pollution but it also is the main cause of climate change (Kan et al., 2012 p. 11). Therefore, the Chinese Premier Li Keqiang's declaration of the war on pollution in March 2014 aims to respond to the rising concern about air pollution and climate change in China (McMullen-Laird et al., 2015 pp. 1-4). In this sense, eliminating the heavy dependence on coal was not only considered a main solution to air pollution but also it was discursively linked to a path towards low carbon energy in the constructed discourse of the newspapers and policy rhetoric.

#### **8.4.3 Action and Participation**

China recognised the reality of climate change and realised the seriousness of addressing the issues even in 2007. At least, China did not hold a sceptical view on the scientific certainty of climate change (Schröder, 2011 p. 21). While some

statements were linked to the scientific uncertainty of climate change in the constructed discourse in the newspapers, they had been constructed weakly.

However, the climate coverage did not construct the recognition and realisation of climate change as a resolution on substantial emission reduction. The newspapers construct technological limitations and emphasise the importance of the development of advanced technologies in the coverage. Also, they constructed the importance of the financial and technological support from developed countries in the coverage.

The climate change policy rhetoric changed dramatically with the emergence of public participation in China. In 2015, the storyline 'participation' was emerging as an important statement identified in the key policy document (see Table 7.3 and Table 7.6, Chapter 7). The policy rhetoric shows that taking action on salvaging the planet demanded broad public participation including the roles of private sectors, academic actors and NGOs in addressing climate change. Therefore, the constructed climate change discourse and policy rhetoric of China witnessed a shift from realisation to action revealed in my thesis.

#### **8.4.4 A shift in the responsibility**

As Foot and Walter (2010) state, deadlock over global progress in addressing climate change is recognised as the lack of the substantial participation of two emitters namely the US and China. This is not to say that other major emitters should have less responsibility for the cause of climate change. Rather, China and the US are recognised as two key roles in global politics of climate change because they are the biggest emitters and economies.

The US signed and ratified the UNFCCC and the Kyoto Protocol with its commitment to emission reduction. However, due to the President Bush's rejection, the US did not ratify the implementation of the Kyoto Protocol in March, 2001 (McCright and Dunlap, 2003, Giddens, 2015). The main reason why the US quitted the Kyoto Protocol is its opposition to the categorisation of some emerging economies and emitters such as China and India into non-Annex parties. With this categorisation, China did not have the responsibility for and obligation of compulsory emission reduction. Therefore, the US refused to ratify it without the inclusion of the emerging emitters into the legally-binding group.

In the early 1990s, China, India and other developing countries were far behind the advanced countries in terms of the levels of economic development and carbon dioxide emissions (WorldBank, 2016). However, with a shift in global circumstances, the economic size of emerging economies including China, India, Brazil and Russia was about 23.3% of global economy in 2000, and thus these four countries were named as BRICs (O'Neill, 2001). The BRICS countries witnessed a sharp increase in carbon dioxide emissions from 2004 to 2010 (Wu et al., 2015). Particularly, after the global financial crisis in 2008, the Group of Twenty (G20) was formed by major global economies. China started to recognise its important status and role in global affairs. For this reason, the responsibility of China and major emitters and economies had emerged in the constructed climate change discourse.

The constructed radical discursive change from different responsibilities to common commitment was identified in the coverage. The US President Obama and Chinese President Xi were cited to vow to achieve the objective of substantial emission action in November, 2014 during the Summit on Asia-Pacific Economic Cooperation (APEC) (Dimitrov, 2016). In September, 2016, China and the US jointly announced the ratification of the Paris Climate Change Agreement during the G20 summit, and one month after this, India ratified it. This means that the Paris Climate Change Agreement would take into force since being ratified by at least 55 countries representing more than 55% of global emissions of greenhouse gases (WRI, 2016).

In summary, the associations between the constructed climate change discourse and policy rhetoric can be identified and revealed in my work. Also, my research explains the evolution of the climate policy rhetoric in a wider political, economic and social context.

## **8.5 Constructed discourse networks identified in different newspapers**

- How and why do the three different newspapers construct climate discourse networks differently?

Based on Chapter 7, it is clear that the dominant constructed climate change discourse networks are identified to vary across three newspapers in China. Addressing this question makes a contribution to the development of research on various social actors and storylines of climate change discourses in China made by



Ellermann (2013) and Wübbeke (2011) explained in Chapter 2 and Chapter 3. Also, as explained in Chapter 2, due to the Chinese political and media system, the different natures of newspapers determine their distinctive features of constructing dominant discourses and discourse networks. It is important to note that this finding confirms the research on the categorisation of newspapers in China made by Stockmann (2013 pp. 70-73).

### **8.5.1 Constructed discourse networks in *People's Daily***

In *People's Daily*, the dominant constructed discourse is generally in line with governmental voice and policy rhetoric. As explained in Chapter 2, this is because *People's Daily* plays a key role in the agenda-setting of the Party and the Chinese Central government (Shambaugh, 2007 pp. 50-51, Stockmann, 2011 p. 21). For example, after the critical point in 2007, the dominant development discourse network was identified to construct the key elements of *the National Climate Change Programme* in the coverage (see Table 7.1).

Also, *People's Daily* has the obligations of reporting the activities and speeches of top Chinese leaders such as President Hu and Premier Wen in 2007 and 2009 and President Xi and Premier Li in 2015. The storylines centralised around governmental actors in the constructed networks were, to a great extent, identified from the statements of those political speeches in *People's Daily*. Because of the large volume of coverage related to these leaders, the storylines were structured and identified clearly around the governmental actors cited in the constructed networks. However, before the critical point in 2015, due to lack of the relevant speeches of top political leaders, the governmental actors were not highly cited in the constructed climate discourse networks in *People's Daily*. The Chinese Central government (CC gov) was even cited to be marginal in the constructed network.

While Tolan (2007 pp. 8-9) demonstrates that the Chinese media mainly cite Chinese government actors, my research shows a wide range of actors cited as news sources in the coverage. As explained in Chapter 2, this PhD thesis confirms and contributes to research on transitions in China's media system developed by Zhao (2004 p. 5) and that various actors have been cited and found in the official newspapers in China if they do not stray far away the Party's line.

### **8.5.2 Constructed discourse networks in *China Daily***

Similarly, as explained in Chapter 2, *China Daily* is a national official newspaper and constructs the climate discourse, to a great extent, around governmental voices. In this paper, the dominant constructed discourse networks were identified to construct the discourses of development and low carbon in 2007 and 2015 respectively. This is because governmental actors were widely cited to support storylines of the dominant constructed discourses.

However, as demonstrated in Chapter 2, *China Daily* is categorised as a relatively open paper. It is in this sense that this paper constructed differed discourse networks to that in *People's Daily*. As analysed in Chapter 7, after the critical point in 2009, there were two competing dominant constructed discourse networks identified in the coverage. On the one hand, a wide range of actors including governmental bodies was cited to construct the discourse of development defending China's fundamental positions on climate issues in *China Daily*. Particularly during and after the Copenhagen conference in December 2009, many actors were cited as news sources for resisting international pressure on China to accept the legally-binding target of addressing climate change. *China Daily* constructed the different responsibilities for addressing climate change between developed and developing countries in the constructed discourse of the coverage. On the other hand, various actors were cited to construct the discourse of ecological modernisation supporting storylines such as 'transformation', 'behaviour' and 'surviving' in *China Daily*. Apparently, the governmental actors were not cited heavily to dominate the constructed discourse network even after the critical point in 2009. Therefore, the two competing dominant constructed discourse networks identified in the coverage demonstrate that *China Daily* can construct various climate change discourses which are not necessarily in line with the governmental voice.

### **8.5.3 Constructed discourse networks in *Southern Weekend***

Compared to *People's Daily* and *China Daily*, *Southern Weekend* constructs very fragmented climate change discourse networks in the coverage. As explained in Chapter 2, it is more marketed and it can select more various voices than other newspapers with less stringent control of the Chinese propaganda system. There are three features of the dominant constructed discourse networks identified in this paper. Firstly, the key government actors were not clearly cited in the constructed

climate change discourse networks. This is mainly because *Southern Weekend* is identified as a commercialised and relatively open paper. It does not have to completely report official messages particularly like the political speeches of top leaders. However, the year 2009 witnessed some governmental actors cited in the coverage because *Southern Weekend* interviewed the officials from MoFA and NDRC for the Copenhagen conference. Secondly, my analysis can hardly identify the dominant constructed discourse networks particularly in 2009 and in 2015 in this paper. It seems that *Southern Weekend* is not very sensitive to citing various governmental actors in the coverage. Thirdly, compared to governmental voices, various non-state actors can be identified in the constructed networks. In brief, the fragmented climate discourse networks are constructed and determined by the nature of *Southern Weekend*. As expected in Chapter 2, the commercialised and relatively open paper can make various storylines, cite claim-makers and construct discourses which are not relevant to policy rhetoric and governmental voices.

#### **8.5.4 Various but limited constructed climate change discourse networks**

To summarise, there are two essential features of the constructed climate change discourse networks across the three newspapers in China. On the one hand, these papers including *People's Daily* can more or less construct the various climate change discourses in the coverage beyond policy rhetoric. This finding strengthens the knowledge developed by Zhao (2004 p. 5) and Stockmann and Gallagher (2011 p. 440). As I showed in Chapter 2, China's media reform adjusts the relationship between the state and the market and allows various voices. My PhD thesis finds that a wide range of actors have been cited as news sources in the climate coverage across the newspapers. As revealed in Chapter 6, some renowned global NGOs such as Greenpeace can be cited and found even in *People's Daily*. This demonstrates that discourse network approach can theoretically travel to test the case of newspapers in China, which is discussed in Chapter 3. It confirms that the approach, which was developed in pluralist liberal democracies, for broader discourses beyond newspapers, does have some analytical purchase in newspapers within the more authoritarian Chinese political system. The success in the theoretical travelling is achieved by identifying various actors cited in climate coverage. This finding has wider implications for the analysis of discourse networks in other non-pluralist political and media systems.

On the other hand, these papers cannot challenge the fundamental principles of addressing climate change in China. Firstly, this finding contributes to research developed by Wübbeke (2013 p. 712) that Chinese academic actors were not cited and identified as a discursive power to change China's fundamental position on the principle of common but differentiated responsibilities in the coverage. One main reason is that the Chinese academic community keeps a very close relation with the Chinese government and has limited impact over challenging the fundamental climate discourse (Wübbeke, 2013 p. 731). Even though *Southern Weekend* is a commercialised paper and can construct various voices, it could not create challenges to the key elements of governmental policies and positions in the coverage. Secondly, as explained in Chapter 2, the nature of the Chinese media determines that the propaganda system remains in charge of supervising coverage in China (Zhao, 2004 p. 180, Shambaugh, 2007 p. 40). Economic development and the historical responsibility for climate change are key storylines identified in the constructed discourses across the newspapers even including *Southern Weekend*. Criticisms of Chinese governmental action on climate change has not been found in the newspapers. Also, the various non-state actors could be filtered into the coverage of climate change in order to ensure that their constructed storylines could not discursively pose a threat to the fundamental political system and policies of China.

### **8.5.5 Three different features of the constructed climate change discourses and discourse networks across the three newspapers**

Based on the above discussion, this section summarises the three different features of the constructed climate discourse and discourse networks across the three newspapers. *People's Daily* is an official newspaper and a mouthpiece of the Party and the Chinese Government. The Chinese governmental positions and discourse can substantially enter the constructed climate change discourses and networks. *China Daily*, being a national official newspaper, has such a feature of reporting governmental voices in the coverage. However, due to being a commercialised paper, Chinese governmental discourse cannot completely determine the feature of the constructed discourse and networks identified in *China Daily*. *Southern Weekend* is a highly commercialised and marketised paper. Chinese governmental and propaganda system fail to exert strong control on constructing the climate discourse

in Southern Weekend. Therefore, governmental voices have not been cited as main sources in the constructed discourse and networks of this paper.

## **8.6 Social construction of climate change issues in China**

- How have climate change issues been discursively constructed and various actors been cited in newspapers in China at critical points over time?

In order to answer the central research question, this PhD thesis employs a social constructionist perspective for discussing how the newspapers construct climate discourses and represent various actors in the coverage. As explained in Chapter 3, discursive construction is considered to be a set of dynamic processes rather than a single static situation.

My thesis discovers that various actors, ranging from governmental bodies, academia, business and private entrepreneurs, international organisations, foreign governments and NGOs, have been cited in the constructed climate change discourse networks identified in the three newspapers. Also, it contributes to the observation of constructed discursive structuration and institutionalisation identified in the coverage. Chapter 7 reveals how the various storylines have been structured around a wide range of actors cited in the constructed climate change discourse networks. It also discusses how they are linked to the governmental actors identified in the constructed networks. Therefore, my thesis identifies the three dominant constructed discourses and constructed discourse networks. Furthermore, it compares the constructed climate discourse in the newspapers and policy rhetoric in the documents and discusses to what extent policy rhetoric can be reported in the climate discourses by the newspapers.

A distinctive feature of my thesis is an observation of changes in dominant constructed climate change discourse identified in the newspapers in China. As revealed in Chapter 7, the dominant constructed discourses are development, ecological modernisation and low carbon in 2007, 2009 and 2015 respectively. Although the dominant constructed discourse can be identified in three newspapers, this does not mean that two other constructed discourses disappeared in the constructed networks. My thesis reveals the dynamic processes of how the newspapers construct the dominant discourses identified in the coverage.

Also, the three dominant constructed discourses can be linked to the same set of actors cited in newspapers in China. This method breaks the boundary between the three discourse networks. The findings confirm the research developed by Metze and Dodge (2016 p. 9) that actors can be cited in bridging different discourse networks by being linked to the storylines constructed and identified in the coverage. An actor can be categorised into the three different discourse networks simultaneously as it is cited to support the storylines under the constructed discourses. This can explain why the constructed climate change discourse of China is very complicated. For example, after the critical point in 2015 in *People's Daily*, the MoFA was cited to construct the discourses 'development' and 'low carbon' in the constructed network. Unlike competing discourses demarcated with a clear boundary, my work reveals that the constructed climate change discourse of China has developed from previous discourse over time.

It is important to note that the newspapers can select the climate change positions of various actors in their climate coverage. As revealed in Chapter 6, *People's Daily* had cited the UN, academic actors (CASS and Tsinghua), the US, the EU and India in the coverage. This is because the paper focuses on national and international governmental affairs. *China Daily* cited a much wider range of actors and their positions in the coverage compared to *People's Daily*. *Southern Weekend* can cite the positions of non-state actors such as FoN and Greenpeace.

On the one hand, the climate coverage of the newspapers can cite the positions of the key actors discussed in Chapter 6. For example, the IEA focused on energy issues and low carbon economy, which could be cited and identified in *People's Daily* and *China Daily*. The change of US positions on climate issues can be identified in the coverage in China. This is because the Chinese newspapers blamed the US for its inaction on reducing emissions in 2007 and they constructed the climate cooperation between China and the US in 2015. On the other hand, the Chinese newspapers can select the positions of the various actors to strengthen the legitimacy of Chinese stances on climate change issues. For example, the EU, in its documents, emphasises global climate justice particularly different historical responsibilities between developed and developing countries. However, in the constructed discourses of the coverage, the EU was cited as a news source for supporting the development discourse particularly in 2007. Similarly, while

Greenpeace showed its proactive attitude towards reducing emissions, it was cited to emphasise the responsibilities of developed countries in coverage.

## 8.7 Summary

This chapter discussed the constructed discursive structuration and institutionalisation of climate change identified in *People's Daily*, *China Daily* and *Southern Weekend*. Firstly, a social constructionist and interpretivist approach provides a new perspective for understanding the relationships between the constructed climate change discourse and various social actors identified in the coverage. This is not to simply reduce climate problems to language. Rather, the approach can reveal how and why the constructed climate change discourses of China have changed.

Secondly, this chapter concluded that the newspapers can cite various actors as news sources to discursively construct climate change issues in the coverage. This reflects the ontological position of this PhD thesis. Also, the chapter discusses the associations, rather than a causal link, between the constructed discourses and policy rhetoric. This reflects the epistemological position explained in Chapter 3.

Thirdly, this chapter explained the dynamic process of the constructed climate change discourses in the newspapers and the distinctive features of development, ecological modernisation and low carbon. The discursive change reflects the fundamental nature of constructed climate change discourse networks of the newspapers in China. More importantly, the present research makes a contribution to understanding the development of the dominant constructed discourse networks using an interpretivist approach to Discourse Network Analysis (IDNA). It uncovers that an actor can be cited to construct different discourses and discourse networks simultaneously. It is very effective to visualise the constructed climate change discourses and discourse networks of the newspapers.

On the basis of addressing the research questions, the final chapter will show the conclusion of this PhD thesis and respond to the expectation clarified in the Introduction. Also, the Conclusion will demonstrate the limitations of present research and future academic directions.

## Chapter: Conclusion

This chapter provides the conclusions of the main findings related to expectations, academic contributions, the future constructed climate change discourse of China, and limitations of this PhD thesis and recommendations for future research.

Drawing on Chapter 8 with discussions on the findings of discourse network analysis and responses to the research questions, it is very important to return to the expectations forwarded in the Introduction. This PhD research supports the expectations and concludes that the dominant discourse network can be constructed and identified with various constructed storylines and news sources in the climate change coverage across *People's Daily*, *China Daily* and *Southern Weekend*.

My thesis makes a contribution to theoretical and methodological applications and discussions. Firstly, it provides a new perspective for understanding the dynamic constructed climate change discourses in the newspapers of China. Secondly, based on the review of a wide range of literatures on environmental discourses, it identifies and elaborates development, ecological modernisation and low carbon as three constructed climate change discourses in the newspapers in China. Thirdly, my work uncovers how the constructed climate change discourse networks are identified to vary across different newspapers with its in-depth analysis of the political and media system of China. Fourthly, it establishes an interpretivist approach to discourse network analysis applied to the constructed climate change discourse of the newspapers.

This PhD thesis indicates that a low carbon development trajectory will emerge in China constructed and identified in climate coverage and policy rhetoric. However, due to the nature of the incoherence of discourse, it is very difficult to predict the details of future climate change discourse constructed by the newspapers in China.

Finally, this chapter states the limitations of my thesis and recommendations for future research. As discourse can be transformed in different ways, climate change could be interpreted in terms of other fields and issues. Future research should look at a wider range of climate change issues such as low carbon and resilience. Based on the study of various actors represented in the discourse networks, future research can focus on a specific discussion on the discursive relationships between local,



provincial, national and international actors in the constructed discourse in China. Also, future research can extend the approach adopted in this PhD thesis to the cases of other developing countries such as India (Billett, 2010) and different political systems such as Greece (Gkiouzepas and Botetzagias, 2015). And, it is very important to conduct a comparative study across major emitters and economies such as the USA. Last but not least, with the recent widespread use of WeChat and Weibo, it is feasible to explain climate change communication and politics in the social media in China.

## **Main findings referring to research questions and expectations**

Based on Chapter 8, this section summarises the responses to research questions and responds to the expectations forwarded in the Introduction.

- Central question: How have climate change issues been discursively constructed and various actors been cited in newspapers in China at critical points over time?

My thesis discovers that various actors including governmental bodies, academia, business and private entrepreneurs, international organisations, foreign governments and NGOs have been cited in the climate change discourse networks of the three newspapers. Also, it contributes to the observation of newspapers constructing the discursive structuration and institutionalisation identified in the coverage.

A distinctive feature of my thesis is an observation of changes in dominant constructed climate change discourse identified in the newspapers in China. As revealed in Chapter 7, the dominant constructed discourses are development, ecological modernisation and low carbon in 2007, 2009 and 2015 respectively.

It is important to note that the newspapers can select the climate change positions of various actors in their climate coverage. As revealed in Chapter 6, *People's Daily* had constructed the climate discourse as close to the positions of the selected actors such as the UN, the EU and India in the coverage. This is because the paper focuses on national and international governmental affairs. *China Daily* cited a much wider range of actors and their positions in the coverage compared to *People's Daily*. *Southern Weekend* can select the positions of non-state actors such as FoN and Greenpeace.

- Sub-question: Do the dominant constructed climate change discourses identified in the coverage vary across newspapers? If so, what are they? In what way do they vary?

*People's Daily* is the mouthpiece and it can construct discursive consistency around the critical points identified in the coverage (see Chapter 7). Similarly, *China Daily* can construct to some degree the discursive consistency around the critical points. However, after the critical point in 2009, it cited a wide range of actors to defend China's policies and positions such as economic development and interests of developing countries in the coverage especially during the Copenhagen Summit. Differently to *China Daily* and *People's Daily*, *Southern Weekend* constructed its discursive evolution which is obviously not relevant to policy rhetoric. It is worth noting that *Southern Weekend* constructed three competing discourses and even included 'development' after the critical point in 2015.

- Sub-question: To what extent have various actors been cited and particularly been selected to derive the legitimacy of governmental positions in climate coverage across the three newspapers?

The non-state actors and governmental bodies can be cited to support the same storyline in the climate coverage. For example, *People's Daily* cited the UNFCCC to support the rights and interests of developing countries in addressing climate change in September, 2009.

It is quite surprising that some NGOs such as Oxfam can be found in the mouthpiece particularly like *People's Daily*. Its voice can be cited to support the rights of developing countries and the obligations of developed countries. It is important to note that these non-state actors have to be cited to express their views along the so-called political correctness of China.

However, the newspapers can, to a greater or lesser extent, construct discursive competition between non-state actors and governmental bodies cited in the coverage. As discussed in Chapter 7, while the Chinese governmental actors were cited as news sources for defending the fundamental principles of economic development and historical responsibility in the climate coverage, a wide range of non-state actors were cited to support the storylines 'major emitters' and 'China resp'

even in *People's Daily*. This demonstrates that the non-state actors have not necessarily been cited to agree with governmental actors and policy rhetoric in the climate coverage.

- Sub-question: How have constructed climate change discourses been structured in the coverage across newspapers?
- Sub-question: How have constructed climate change discourses been institutionalised in the coverage across newspapers?

Although economic opportunity was not constructed as a marginal storyline in the coverage even in *People's Daily* and *China Daily* in 2007, it was not clearly linked to the key governmental actors in the constructed network until in 2009. This demonstrates that the newspapers started to construct the importance of the green and low carbon economy in 2009. Economic opportunity and emissions reduction were constructed to converge on the discourse of low carbon in the coverage particularly in 2015.

The climate coverage had constructed a slight change in the fundamental principle of common but differentiated responsibilities since 2009. In *China Daily* in 2009, Chinese Premier Wen Jiabao (State Council) was cited to urge developing countries to take a positive step to address climate change. More importantly, in *China Daily* in 2015, Chinese President Xi (CC gov) was cited to state that the principle of common but differentiated responsibilities did not mean that developing countries could shirk their responsibilities for addressing climate change. This discursive shift is mainly because the developing countries such as China and India were constructed as emerging economies and major greenhouse gases emitters in coverage.

- Sub-question: What are the similarities and differences between the constructed climate change discourses in newspapers and the climate policy rhetoric?

As analysed in Chapter 7, the constructed discourse, particularly in the commercialised papers, did not necessarily change in line with policy rhetoric. The constructed storyline could be identified in the coverage prior to the governmental announcement.

However, the constructed discourse particularly in the official newspapers can be identified to evolve around the development of policy rhetoric. As explained in

Chapter 5 and Chapter 7, even in 2015, the climate change discourse of the newspapers still constructed the important principle that while developed countries should take the historical responsibility for emission reduction and technological and financial transfers, developing countries concentrate on their economic development and poverty eradication.

- Sub-question: How and why do the three different newspapers construct climate discourse networks differently?

*People's Daily* is an official newspaper and a mouthpiece of the Party and the Chinese Government. The Chinese governmental positions and discourse can substantially be reported in the climate change discourses and networks of the newspaper. *China Daily*, being a national official newspaper, has such a feature of citing governmental voices in the coverage. However, due to being a commercialised paper, Chinese governmental discourse cannot completely determine the feature of the constructed discourse and networks identified in *China Daily*. *Southern Weekend* is a highly commercialised and marketised paper. Chinese governmental and propaganda system fail to exert strong control on constructing the climate discourse in *Southern Weekend*. Therefore, governmental voices have not been cited frequently in the constructed discourse and networks of this paper.

#### ***Discourse networks with various storylines and different actors constructed and identified in newspapers***

- Expectation: Constructed discourse networks contain a wide range of different actors cited in with various storylines identified across newspapers.

This PhD thesis reveals that the newspapers in China can construct a discursive space for citing a wide range of actors to make various storylines in their climate coverage. With the economic reform and the marketisation of the media system in China, the newspapers analysed, particularly *China Daily* and *Southern Weekend*, construct discursive flexibility in climate change coverage. *China Daily* is identified as a form of national official media primarily constructing the climate discourse around governmental voices. Also, it is identified as a relatively open paper constructing various discourses beyond policy rhetoric. *Southern Weekend* is identified as a commercialised paper constructing various discourses. These newspapers cite various actors as news sources including governmental bodies, business, academia, international institutions and NGOs.

Even in *People's Daily*, which is the mouthpiece of the Chinese government, various constructed storylines can be found in the coverage ranging from development to economic opportunity, from heavy dependence on coal to low carbon energy and from different historical responsibilities to China's leadership. A major difference to other newspapers is that *People's Daily* constructs the centralised discourse in line with government voices. However, it is more surprising that many NGOs such as Greenpeace can be cited and found in the paper.

Also, this finding proves that the discourse network approach can be employed to understand the constructed climate change discourses of China beyond Western countries; an important contribution to the academic literature. It is very important to state that the dominant discourse networks can be constructed and found not only in the newspapers in democratic systems but also in authoritarian states like China. Although the Chinese government is highly sensitive to political discussions on democracy and human rights, climate change is not particularly constructed to be controversial in newspapers in China, which is different to the UK and the USA (Fisher et al., 2013, Broadbent et al., 2016).

### ***Dynamic constructed climate change discourses***

- Expectation: The dominant constructed climate change discourse identified in the coverage has been changing at critical points over time in newspapers in China.

This PhD thesis reveals the nature of dynamic constructed climate change discourses in China. The dominant constructed discourse in the newspapers has changed from development and ecological modernisation to low carbon in 2007, 2009 and 2015 respectively. This research supports an expectation that the constructed climate discourses are dynamic processes rather than static situations. The changes in dominant constructed climate change discourse demonstrate that China's interpretations of the issues have been constructed to evolve over time in the climate coverage.

In 2007, under the constructed development discourse, the climate coverage of the newspapers focused on economic opportunity, dependence on coal, the scientific reality of issues and different responsibilities between developed and developing countries. In 2009, the climate coverage discursively constructed the notion of

ecological modernisation as the main direction of addressing climate change. Addressing climate problems was linked to improving existing economic and industrial systems and utilising economic tools in the constructed discourse. Also, the climate discourse was constructed to encourage people to change their lifestyles and saw climate change as a real threat to human survival and security. In 2015, this constructed discursive dominance was replaced with the low carbon discourse identified in coverage. It constructs a positive attitude towards a low carbon economy, a carbon peak, coal control, public participation, local action and the responsibility of major emitters including China. This PhD research illustrates the dynamic nature of the constructed climate change discourse in newspapers in China.

### ***Constructed discursive structuration and institutionalisation of climate change in newspapers***

- Expectation: A dominant constructed discourse network contains storylines and their links to various actors particularly the key governmental actors cited in the coverage. The newspapers can construct different features of the dominant constructed discourse networks identified in the coverage.

This PhD thesis makes a contribution to the understanding of constructed discursive structuration and institutionalisation of climate change in the newspapers. This study acknowledges the gap between the constructed discourses in the selected newspapers and the policy rhetoric in the documents. Therefore, its primary task is an observation and analysis of constructed discursive evolution in the newspapers. In this sense, a distinctive feature of this research is that the constructed discursive structuration refers to the situation that various storylines are linked to a wide range of actors cited in coverage and the constructed discursive institutionalisation means that these storylines are linked to the key governmental bodies cited as news sources in the newspapers.

Based on Chapter 7, it is very important to state that the climate change discourse can be constructed in the newspapers and be well-structured and institutionalised in the constructed climate discourse networks. For example, having been linked to the storyline 'economic opportunity', the ideas for green and low carbon economy were identified to move from non-state actors to key governmental bodies cited in the constructed discourse networks.

The three newspapers reflect different features of constructing discursive structuration and institutionalisation identified in the climate coverage. In *People's Daily*, climate change discourses were constructed to be institutionalised and centralised around governmental actors cited in the networks. In *China Daily*, climate change discourses were constructed to be quite fragmented and were not constructed necessarily in line with governmental voices. In *Southern Weekend*, the constructed discourses were not directly relevant to governmental voices. Basically, these differences are determined by the nature of these newspapers and China's media system.

### ***Constructed climate change discourse in People's Daily***

- Expectation: *People's Daily*, being the tightly controlled state mouthpiece, changes the constructed climate change discourses in the coverage in line with the policy rhetoric over time.

As explained in Chapter 2, *People's Daily* was selected as one of the data sources for observing how climate change discourses have been constructed in the mouthpiece of the Chinese government. It is reasonable to conclude that the constructed climate change discourse changed in line with the climate policy rhetoric over time in *People's Daily*. This is because key governmental actors were cited to support the storylines around policy rhetoric and to dominate the constructed climate change discourse networks. The prominent example is the coverage of speeches on climate change by top Chinese leaders. The discursive centralisation constructed around the key governmental actors in the network is due mainly to the citations of Chinese President Hu, President Xi, Premier Wen and Premier Li. Other key governmental bodies such as NDRC and MoFA were cited to express their positions on climate change issues and negotiations in this paper. Therefore, the discursive changes in this mouthpiece are constructed in line with climate policy rhetoric.

### ***Constructed climate change discourse in China Daily***

- Expectation: *China Daily*, being the more open official newspaper, develops the constructed climate change discourses to some degree around the policy rhetoric over time.

Similarly, *China Daily* is a national official newspaper and can construct climate discourse around policy rhetoric. It constructs a platform for delivering official

messages and governmental positions. In this sense, the constructed climate change discourse evolves generally around the climate policy rhetoric over time in *China Daily*.

However, as explained in Chapter 2, *China Daily* is a relatively open paper. It can construct various storylines and cite a wide range of actors. These various storylines were not necessarily constructed around the policy rhetoric. Particularly in 2009, there were two competing constructed discourses identified in *China Daily*. While the key governmental actors were cited to construct development discourse defending China's fundamental positions on climate change, a wide range of non-state actors were cited for emphasising the positive action to construct the ecological modernisation discourse in the coverage.

Therefore, the constructed climate change discourse develops to some degree around the climate policy rhetoric over time in *China Daily*. On the one hand, it is a national official newspaper and it has to more or less construct the discourse around governmental messages and voices. On the other hand, this paper can construct various climate change discourses which are not necessarily in line with policy rhetoric.

### ***Constructed climate change discourse in Southern Weekend***

- Expectation: *Southern Weekend*, being the open and commercialised newspaper, shows its changes in constructed climate change discourses which are not directly relevant to the policy rhetoric over time.

A major difference to *People's Daily* and *China Daily* is that *Southern Weekend* is identified as a commercialised paper in China. Based on Chapter 7, the climate change discourse networks are constructed to be very fragmented in *Southern Weekend*. Firstly, those storylines and discourses constructed and identified in the networks are not directly relevant to the policy rhetoric particularly in 2009 and 2015. Secondly, because the paper does not have the obligations of reporting those speeches of top political leaders of China, the key governmental bodies such as the Chinese central government and the State Council were not cited in this paper. Therefore, the constructed climate change discourse is not directly relevant to the policy rhetoric in *Southern Weekend*.



## **Academic contributions**

### ***Climate change politics and discourse of China***

Discourse provides a perspective for observing, understanding and analysing how the newspapers construct climate change issues in China. As explained in Chapter 1, there are a wide range of previous studies on the climate change politics of China. These studies focus on institutional arrangements, policy processes, interests and concerns in terms of addressing climate change in China. However, this PhD thesis contributes to an understanding of the constructed climate change discourse of China. Constructed discourse can begin to reveal the complexity of climate politics in China. Discourse network analysis can uncover how various interpretations of climate change in the coverage can evolve over time and be associated to policy options.

The economic dimension of the climate change discourse of the newspapers can be constructed as the discursive transition from development to economic opportunity. The energy issues were discursively constructed to change from China's dependence on coal consumption to its promise to reach a carbon peak. Chinese newspapers constructed attitudes towards climate change from an emphasis on being the victim of the negative impacts of climate change to a focus on resilience to its threats. In terms of climate change negotiations, China was constructed to adopt the responsibility for taking action on substantial emissions reduction but economic development and different historical responsibilities remained constructed as China's fundamental principles and positions in the climate coverage.

### ***A social constructionist perspective for understanding climate change issues***

This PhD thesis employs a social constructionist perspective and adopts a social ontological and social epistemological position. While the discussion on ontology and epistemology is very important to political sciences, it is not well-developed in studies on climate change politics and discourse in China.

Climate change issues can be discursively constructed by the newspapers. This social ontological position challenges commonly held views on the objective dimension of climate change. This is not to deny the physical existence of climate change issues. However, the interpretations of its existence can influence and

provide solutions to the issues. Therefore, this ontological position points to an understanding and analysis of socially constructed climate change issues.

Given that my work focuses on constructed climate change discourse, it is very important to discuss the epistemological consideration. It adopts a social epistemological position as the PhD research focuses on the extent to which the constructed climate change discourses are associated with, rather than cause, policy rhetoric. While an objective epistemological position looks at establishing causal links between the constructed discourse and policy, the social epistemology aims to reveal the interaction of discourses.

***Constructed climate change discourses identified in the newspapers: development, ecological modernisation and low carbon***

Although a wide range of studies on environmental discourses can be found and summarised in Chapter 3, there is a lack of specific discussion on the constructed climate change discourse of China. This present study not only makes a contribution by categorising the three constructed climate change discourses but also focuses on the dynamic processes of the evolution of the discourses in the newspapers. These constructed discourses are categorised as development, ecological modernisation and low carbon in the dimensions of economy, energy and emissions, public involvement, science and ecology and responsibility.

Development is identified as a main constructed discourse along with economic priority and different historical responsibilities. The main feature of the constructed discourse is China's weak action on addressing climate change. It is worth noting that the development discourse indicates that China recognises the reality and seriousness of climate change. The constructed notion of ecological modernisation is identified as a discourse providing a balance between economic development and environmental protection. Also, the constructed notion of ecological modernisation plays an important role in bridging the gap between obstacles and opportunities to mitigating climate change. The constructed low carbon discourse makes a link between addressing climate change and opportunities and responsibilities. The constructed low carbon discourse involves a positive attitude towards addressing climate change.

These three constructed climate change discourses can be identified in the newspapers in China. The dominant constructed discourse has changed with shifts in storylines concerning climate change over time in the newspapers. This study therefore establishes a significant basis for a longitudinal study of dynamic constructed climate change discourse in China.

### ***Climate change coverage of China***

This PhD thesis makes a contribution to the media study on climate change in China. The primary contribution is an analysis of how different actors are selected by journalists to make sense of climate-related issues in the newspapers. It is interesting to see that the various ideas of climate change can be constructed and found in the newspapers in China. The secondary contribution is a comparison of climate change coverage in three different newspapers in China. Therefore, the present research supports the expectation that the different roles and natures of the newspapers determine different features of climate change coverage and the constructed discourse networks in China.

### ***Discourse network approach and analysis***

A main contribution of the PhD thesis is the development and integration of discourse network analysis and borrowing the key elements from the discourse coalitions approach. Firstly, as explained in Chapter 4, it introduces an interpretivist approach to discourse network analysis. Analysing and visualising data is the main advantage of discourse network analysis. However, based on the social epistemological position discussed in Chapter 3, this study does not look at measurable and quantitative discourse analysis. An interpretivist approach to the discourse network analysis is employed as the methodological tool for the qualitative research on the dynamic constructed climate change discourse of China.

Secondly, in order to observe the dynamic process of constructed climate change discourse, my PhD research looks at different constructed storylines and cited actors identified from the newspapers over time. Storylines can be various concepts and ideas concerning climate change issues constructed in the coverage. Various actors are the news sources cited in the coverage being linked to the storylines. The dominant constructed discourse of the newspapers must contain a set of storylines

and be linked to various actors particularly governmental bodies cited in the coverage. This provides dynamic and empirical data to demonstrate how the newspapers raise storylines, cite various actors as news sources and construct the discourse networks in the coverage in China.

Thirdly, this study observes how various storylines were structured around the key governmental actors cited in the constructed discourse networks. This is labelled as *constructed discursive institutionalisation* in the newspapers.

### **A low carbon path or an unpredictable future?**

It is very important to discuss a significant contribution of this PhD thesis to the broader context of climate change discourse of China and global politics. The main findings support the core expectation that the constructed climate change discourse has been changing over time. For this reason, it is very important to assert that the constructed climate change discourse will continue to change and transform in the future. Based on current findings, on the one hand, a constructed low carbon discourse and pathway has been identified in the coverage. On the other hand, being a major difference to the theory of the path-dependence of institutionalism, as discussed in Chapter 3, discourse is not necessarily coherent.

#### ***A global low carbon path***

China's constructed discursive evolution of climate change can be related to the National Climate Change Programme in 2007, the Chinese position on the Copenhagen conference in 2009 and the Paris climate change agreement in 2015. The period 2007 – 2015 witnessed a great progress in China's positions on climate change. In the constructed discourses of the newspapers, green development and low carbon economy have been linked to a wide range of non-state actors including private companies, international corporates, academia and environmental NGOs cited as news sources. More importantly, ecological civilisation and green development has been recognised as one of fundamental national principles of China (Hu, 2016 pp. 15-16). It is very surprising that these principles could be mainly linked to non-state actors cited in the climate coverage particularly in 2007.

A serious promise to reach a carbon peak and control coal consumption refers to a statement that China's resolution to take substantial action on climate change. China

planned to initiate a national carbon market and implement a cap and trading system in 2017 and will reach a carbon peak around 2030 (Lo, 2015a p. 59). On 19<sup>th</sup> January 2017, China opened the world's largest carbon trading market but it is only implemented in power plants at the current phase (CCCIN, 2017).

Chinese President Xi was cited to express an ambition to be a global leader. This can be demonstrated by a series of international events since President Xi took office in 2012. He released a clear and strong message of China's leading role in global politics through the Shanghai Summit of the Conference on Interaction and Confidence-Building Measures in Asia (CICA) in 2014, the Beijing Summit of Asia-Pacific Economic Cooperation (APEC) in 2014, the China Victory Day Parade in 2015 and the Hangzhou Summit of Group of 20 (G20) in 2016. More specifically, during the G20 summit, China and the US jointly announced the ratification of the Paris climate change agreement. China's ambitions on global leadership will make a great contribution to China's positive attitudes towards climate change issues. Particularly, after the US President Trump declared withdrawal from the Paris Agreement in June, 2017, China expressed a strong desire to continue a low carbon path.

### ***An unpredictable future***

As discourse can be transformed in different ways, it is not entirely possible to predict the exact details of future constructed climate change discourses. Firstly, it is not clear whether Chinese newspapers will change its discourses on economic priority and different historical responsibilities. However, after its rapid economic growth over the last 20 years, China's development miracle is confronting an unprecedented challenge. If addressing climate change is discursively constructed as an effective means of securing economic growth, the newspapers may deepen its low carbon discourse. Conversely, if it is constructed as a threat to economic development, China's climate change discourse will probably be constructed to change to accommodate this perception. Similarly, it is not easy to predict whether the constructed storyline about the principle of common but differentiated responsibilities will change. With an increase in China's desire to lead the global governance of climate change, the definition of different responsibilities may be discursively constructed to change one day.

Secondly, the global politics of climate change is becoming more fragmented. The gap between the rich and poor countries is replaced by a discursive fragmentation of the global politics of climate change. The boundary between developed and developing countries is challenged by China's power, US domestic politics, the European financial crises and political instabilities of less developed countries. It is not easy to predict the details of global constructed climate change discourses.

Thirdly, based on the main findings, the constructed notion of low carbon is identified as the current dominant constructed discourse of climate change in the newspapers in China. Economic opportunity, low carbon energy and resilience are not directly relevant to environmental and ecological protection. In other words, green development does not mean a green discourse which takes ecological conservation as a priority. In this sense, the low carbon future might be constructed as a complicated system with modern facilities and infrastructure resilient to climate change.

### **Limitations of the PhD research and recommendations for future research**

This section discusses the limitations of the PhD research. The nature of the complex and complicated discourses of the newspapers indicates that this PhD thesis cannot reflect the panorama of climate change issues and China. Therefore, it is very important to demonstrate the limitations and provide the recommendations for future research.

Firstly, as the transformation of discourse is not necessarily coherent, climate change issues could be interpreted and socially constructed as other fields and issues. For example, the rise of green development and low carbon economy has emerged as an important feature of the constructed climate change discourse. It is not clear whether the low carbon discourse is evolving into other issues. This indicates that some key storylines of climate change discourse have been constructed to emerge in other fields but they were beyond the scope of the present research. For example, the national carbon market can make a contribution to climate change mitigation but it might be discussed intensively in financial coverage. Therefore, future research should look at a wider range of storylines in news articles related to but beyond the term 'climate change'.

Secondly, based on the main findings of my work, there are a wide range of actors cited and identified across local, provincial, national and international levels. Therefore, future research can employ an interpretivist approach to Multi-Level Governance. It is very important to place an emphasis on the discursive interaction and negotiations between various actors across different administrative levels. For example, it is very interesting how environmental NGOs help take the discourse into action on improving climate change governance from national to local levels. It is worth noting that the research needs to overcome theoretical challenges with ontological and epistemological considerations.

Thirdly, a comparative study across different countries particularly emerging economies and major emitters is a key to an understanding of global climate change politics. For example, it is very important to further study climate change discourse of India which has a similar pattern of economic development (Isaksen and Stokke, 2014). It is very interesting how the discourse networks can be identified in the climate coverage in these newly industrialising countries. A major difference to current comparative and quantitative studies is a qualitative understanding of climate change politics and discourse. It is very important to reveal how these countries make sense of climate change in different ways rather than how frequently they talk about an idea. More importantly, the interpretivist approach to Discourse Network Analysis can methodologically travel to other cases particularly those who have obvious disagreements and competition in climate change discourse. It is in this sense that the approach can methodologically travel back to the Western context by helping uncover dynamic climate change discourses around Brexit and Trump's victory. China is distinct from Western democracies in which there is much more political controversy. In other countries, 'agree' and 'disagree' networks can be found (Gkiouzepas and Botetzagias, 2015 pp. 14-16, Broadbent et al., 2016 pp. 8-9), but in China, the present research only maps the networks based on the 'agree' ones.

Fourthly, social media had not been so advanced and common in 2007 and 2009. With the recent growth in the use of WeChat and Weibo, the social media can be selected as a rich data source for exploring a wider range of storylines and actors in a broader context of climate change discourse. Compared to the newspapers, the social media has received much less state control in China. Also, this approach can be used in other environmental issues in a wider context.

Finally, given that there is a difference between constructed discourses and real discursive politics, it is an opportunity for more works on the process of climate change discourse in China. It is very interesting to observe how various social actors make sense of climate change issues and influence the formation of climate policy rhetoric in China.

## **Summary**

This chapter reviews the main findings, responds to the expectations stated in the Introduction, summarises the academic contributions, discusses the prospects for constructed climate change discourse of China and states the limitations and recommendations for future research. This study provides a fundamental basis for a longitudinal study on the constructed climate change discourse in the newspapers in China. It is very important to extend the present research to a broader range of studies on the climate change politics and discourse of China. Although it is a fact that various concerns such as global financial crisis and domestic political uncertainties are emerging in the public discursive space, climate change will continue to be an important global issue.

An effort to understand dynamic constructed climate change discourses and discourse networks will therefore make a great contribution to the development of existing knowledge of climate change politics of China, social constructionism, environmental discourses, climate coverage and discourse network analysis. Also, it will help people identify solutions to global sustainable development.

As Confucius said over 2000 years ago, the nature of knowledge is that one recognises that he knows and realises that he does not know. In this sense, this PhD thesis recognises the constructed climate change discourse of China and realises the importance of exploring its future development.



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# Appendices

## Appendix A: Frequency of storylines of the three discourses

### Frequency of storylines of development discourse

Storylines	Year	People's Daily			China Daily			Southern Weekend		
		Before	After	Total	Before	After	Total	Before	After	Total
(1) Development	2007	16	44	60	12	50	62	0	4	4
	2009	33	84	117	21	45	66	3	2	5
	2015	1	10	11	4	8	12	0	1	1
(2) Energy consumption	2007	11	10	21	9	19	28	2	2	4
	2009	11	6	17	2	1	3	0	0	0
	2015	0	0	0	0	0	0	0	0	0
(3) Energy mix	2007	7	10	17	7	19	26	0	0	0
	2009	14	20	34	20	19	39	1	0	1
	2015	0	1	1	6	2	8	0	0	0
(4) Carbon sink	2007	4	4	8	1	12	13	0	0	0
	2009	14	12	26	3	4	7	0	0	0
	2015	1	1	2	0	0	0	0	0	0
(5) No cap	2007	2	1	3	2	5	7	0	0	0
	2009	4	1	5	4	0	4	3	0	3
	2015	0	0	0	0	0	0	0	0	0
(6) No target	2007	1	2	3	3	2	5	0	1	1
	2009	1	6	7	4	9	13	1	2	3
	2015	0	0	0	0	0	0	0	1	1
(7) Awareness	2007	4	4	8	12	12	24	1	1	2
	2009	4	6	10	1	16	17	0	0	0
	2015	1	0	1	0	0	0	0	0	0
(8) Adaptation	2007	9	9	18	11	9	20	0	0	0
	2009	13	4	17	2	2	4	0	0	0
	2015	4	3	7	2	0	2	0	0	0
(9) Ecology	2007	23	17	40	28	48	76	2	2	4
	2009	15	5	20	5	3	8	1	2	3
	2015	1	1	2	6	0	6	1	0	1
(10) Research	2007	5	5	10	1	8	9	3	0	3
	2009	4	3	7	0	6	6	0	0	0
	2015	3	4	7	1	1	2	0	0	0
(11) Scientific certainty	2007	10	9	19	30	22	52	7	2	9
	2009	11	5	16	11	10	21	0	9	9
	2015	4	2	6	7	7	14	0	6	6
(12) Uncertainty	2007	1	0	1	1	3	4	0	0	0
	2009	0	1	1	3	8	11	0	9	9
	2015	0	0	0	2	0	2	0	0	0
(13) Developed resp	2007	4	15	19	8	34	42	2	5	7
	2009	36	69	105	42	32	74	2	3	5
	2015	2	20	22	4	8	12	0	3	3
(14) Different resp	2007	9	37	46	8	9	17	1	2	3
	2009	50	59	109	14	28	42	1	8	9
	2015	7	30	37	8	9	17	0	0	0
(15) Diplomacy	2007	0	2	2	1	3	4	1	1	2
	2009	1	5	6	2	7	9	0	0	0
	2015	0	0	0	0	0	0	0	0	0
(16) US resp	2007	1	4	5	11	0	11	0	0	0
	2009	2	0	2	19	16	35	4	3	7
	2015	0	0	0	0	0	0	0	0	0

### Frequency of storylines of EM discourse

Storylines	Year	People's Daily			China Daily			Southern Weekend		
		Before	After	Total	before	After	Total	Before	After	Total
(17) Economic tools	2007	2	5	7	11	32	43	1	0	1
	2009	8	13	21	16	1	17	3	0	3
	2015	1	2	3	1	0	1	0	0	0
(18) Transformation	2007	4	10	14	10	9	19	1	0	1
	2009	24	32	56	30	31	61	7	8	15
	2015	6	20	26	6	15	21	0	1	1
(19) Tech	2007	6	15	21	14	14	28	0	1	1
	2009	28	20	48	26	16	44	6	1	7
	2015	3	4	7	6	3	9	0	0	0
(20) Carbon intensity	2007	0	0	0	1	0	1	0	0	0
	2009	4	15	19	9	11	20	2	4	6
	2015	0	0	0	1	0	1	0	0	0
(21) Behaviour	2007	6	7	13	6	12	18	0	0	0
	2009	5	10	15	6	9	15	0	3	3
	2015	3	0	3	4	2	6	0	0	0
(22) Surviving	2007	8	17	25	15	27	42	2	1	3
	2009	39	21	60	28	15	43	3	5	8
	2015	4	0	4	28	22	50	1	8	9

### Frequency of storylines of low carbon discourse

Storylines	Year	People's Daily			China Daily			Southern Weekend		
		Before	After	Total	before	After	Total	Before	After	Total
(23) Economic opportunity	2007	3	8	11	19	29	48	0	1	1
	2009	44	28	72	34	16	50	2	3	5
	2015	11	23	34	48	25	73	0	1	1
(24) Low carbon energy	2007	0	0	0	1	0	1	0	0	0
	2009	2	3	5	3	2	5	0	2	2
	2015	14	17	31	25	20	45	2	1	3
(25) Market	2007	1	0	1	1	0	1	1	0	1
	2009	0	0	0	1	2	3	2	1	3
	2015	9	9	18	6	2	8	0	0	0
(26) Transparency	2007	0	0	0	0	1	1	0	0	0
	2009	1	3	4	1	2	3	0	2	2
	2015	0	0	0	1	0	1	0	2	2
(27) Participation	2007	0	1	1	9	6	15	1	0	1
	2009	8	8	16	5	10	15	0	0	0
	2015	4	4	8	6	10	16	0	1	1
(28) Resilience	2007	0	0	0	0	0	0	0	0	0
	2009	2	2	4	1	0	1	2	1	3
	2015	7	8	15	8	3	11	0	1	1
(29) Local	2007	2	0	2	3	0	3	0	0	0
	2009	0	0	0	1	1	2	0	1	1
	2015	2	6	8	3	2	5	0	1	1
(30) China resp	2007	0	0	0	1	8	9	0	1	1
	2009	4	1	5	13	10	23	3	3	6
	2015	8	24	32	12	22	34	0	0	0
(31) Developing resp	2007	0	0	0	0	1	1	0	1	1
	2009	10	4	14	2	3	5	1	0	1
	2015	0	6	6	0	3	3	0	2	2
(32) Major emitters	2007	0	1	1	4	12	16	0	0	0
	2009	6	12	18	34	9	43	6	3	9
	2015	9	30	39	24	58	82	0	0	0

## Appendix B: The main actors frequently cited in the coverage

### Main actors cited in the coverage

Actors		Newspapers	People's Daily	China Daily	Southern Weekend
International governmental organisations		UN	5	6	1
		UNEP	4	6	1
		IPCC	4	4	2
		UNDP	3	4	1
		UNFCCC	3	4	-
		WB	3	3	1
		IRENA	1	3	-
		WMO	1	1	2
		UNFAO	4	-	-
International and regional organisations		IEA	2	4	-
		WEF	-	5	-
		ADB	-	2	-
		AU	2	-	-
		IETA	-	2	-
Business actors	Chinese companies	SGCC	-	2	1
		BG	1	1	-
		CPID	-	1	-
		SG	-	1	1
		Vanke		1	1
	Foreign companies	Siemens	1	2	-
		Microsoft	1	1	-
		Shell	1	1	-
		Total	1	-	1
		BP	-	2	-
		NEF	-	2	-
		GS	-	2	-
NGOs	Chinese NGOs	FoN	1	-	1
		CCIEE	-	2	-
		CCICED	1	1	-
		CEPF	1	1	-
	Foreign NGOs	WWF	2	6	2
		Greenpeace	1	6	3
		ED	-	6	-
		Oxfam	1	5	-
		CG	1	2	2
		Carnegie	3	2	-
		WRI	1	2	1
		FoE	-	2	-
		BOAS	-	2	-
Academic actors	Chinese academia	CAS	5	5	3
		CASS	5	5	2
		Tsinghua	2	5	2
		Renmin	2	5	2
		NCC	2	2	2
		Peking	1	4	1

	Foreign academia	ERI	-	4	2
		CAAS	1	3	1
		CAE	2	3	-
		CICIR	1	3	-
		PICIR	2	2	1
		Stanford	1	1	1
		Harvard	1	1	2
		UEA	-	2	-
		UP	-	2	1
		LSE	1	1	-
		Oxford	-	1	-
Foreign governments	National level	US	6	6	3
		EU	3	6	1
		Germany	4	3	1
		France	4	3	1
		UK	2	4	1
		India	4	2	1
		Indonesia	3	3	-
		Brazil	4	2	-
		Japan	2	4	-
		South Africa	3	1	
		Mexico	3	1	-
		Sudan	2	-	1
		Denmark	2	-	1
	Norway	1	2	-	
	Local/functional level	California	2	2	-
NOAA		1	4	-	
Provincial/local		Beijing	2	-	-
Famous individuals		Al Gore	2	2	-
		Nicolas Stern	2	1	-
		Blair	1	1	1

## Appendix C: The key governmental actors linked to various storylines in the coverage

Actors	Year	Discourses	People's Daily	China Daily	Southern Weekend
CC gov	2007	Development	Development (10) Energy consumption (4) Energy mix (2) No target Adaptation (2) Carbon sink (2) Ecology (3) Awareness (2) Developed resp (3) Different resp (7)	Development (8) Developed resp (3) Different resp (2)	N/A
		EM	Transformation (3) Tech (3) Surviving Behaviour	Tech	N/A
		Low carbon	N/A	N/A	N/A
	2009	Development	Development (11) Energy consumption (2) Energy mix (8) Adaptation (3) Carbon sink (4) Awareness Developed resp (6) Different resp (16)	Development Carbon sink (2) Developed resp (2) Different resp	N/A
		EM	Economic tools (2) Tech (5) Transformation (6) Carbon intensity (2) Surviving (6) Behaviour	Carbon intensity Transformation Surviving	N/A
		Low carbon	Economic opportunity (7) Developing resp (2)	Major emitters (2)	N/A
	2015	Development	Development (5) Adaptation (2) Developed resp (3) Different resp (8)	Development Developed resp Different resp (3)	N/A
		EM	Economic tools Transformation (2)	Transformation	N/A
		Low carbon	Economic opportunity (4) Local Resilience Participation (2) China resp (6) Developing resp	Economic opportunity Local Participation China resp Developing resp Major emitters	N/A
State Council	2007	Development	Development (6) Energy consumption (4) Energy mix Adaptation (7) Ecology (8) Research (2) Awareness Developed resp Different resp (8)	Development (3) Energy consumption (2) Ecology Developed resp (2) Different resp (3)	N/A
		EM	Tech (2) Transformation (2) Surviving (2)	Tech	N/A
		Low carbon	Economic opportunity Local	N/A	N/A
	2009	Development	Development (18) Energy consumption (5)	Development (10) Energy consumption (2)	N/A

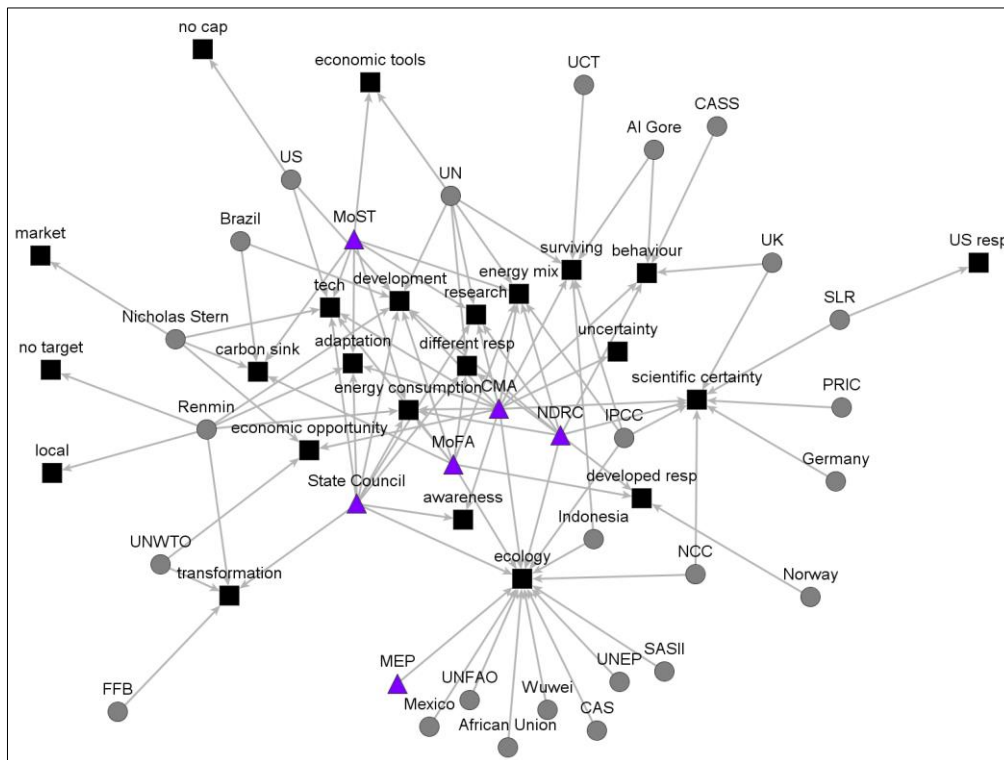


			Energy mix (7) Carbon sink (7) Adaption (4) Ecology (3) Research (3) No target Awareness Developed resp (12) Different resp (28)	Carbon sink (2) No target (2) Different resp (11) Developed resp (9) US resp		
		EM	Economic tools (3) Carbon intensity (6) Transformation (14) Tech (13) Surviving (10) Behaviour	Tech Transformation (5) Carbon intensity Surviving	N/A	
		Low carbon	Economic opportunity (19) Low carbon energy Transparency (2) Participation (3) China resp Developing resp (2) Major emitters (2)	Economic opportunity China resp Developing resp Major emitters	N/A	
	2015	Development	Development Energy mix Adaptation (2) Developed resp (2) Different resp (14)	Development Different resp (3)	N/A	
		EM	Tech Transformation (7) Surviving (3)	Tech (2) Transformation (2) Carbon intensity Surviving (3) Behaviour (2)	N/A	
		Low carbon	Economic opportunity (11) Low carbon energy (5) Market (2) Local China resp (5) Major emitters (4)	Economic opportunity (8) Low carbon energy (6) China resp Major emitters (6)	N/A	
	NDRC	2007	Development	Development (8) Energy consumption Energy mix Ecology (2) Research Scientific certainty (3) Different resp (4) Developed resp (2)	Development (5) Energy consumption (4) Energy mix (3) No cap (4) No target Developed resp (3) Different resp (2)	Development
			EM	Surviving (2) Behaviour (2)	Economic tools (4) Tech (2)	N/A
			Low carbon	N/A	China resp	N/A
2009		Development	Development (13) Energy consumption Energy mix (2) No cap (2) No target Adaptation Carbon sink Scientific certainty Awareness Developed resp (16) Different resp (10)	Development (7) Energy mix (7) No cap Uncertainty Developed resp (9) Different resp (7) Diplomacy US resp (4)	No target Developed resp Different resp	
		EM	Economic tools Tech (3) Transformation (3) Carbon intensity	Economic tools Transformation (3) Carbon intensity (3)	Transformation	

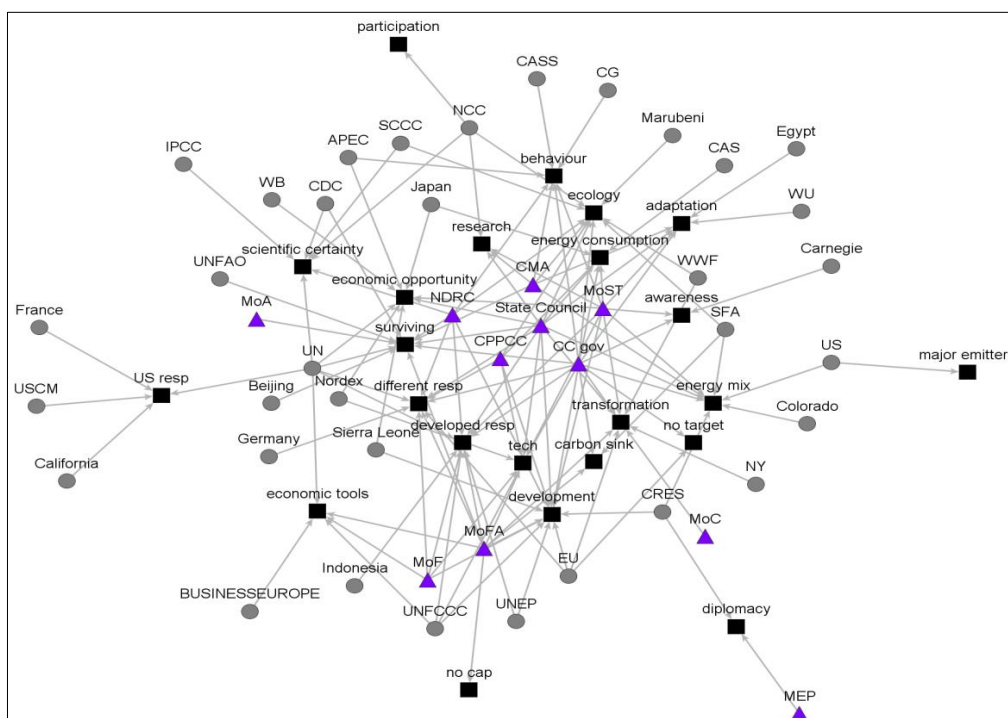
			Surviving		
		<b>Low carbon</b>	Economic opportunity (5) China resp (2) Developing resp	Economic opportunity (2) Transparency	N/A
		<b>2015 Development</b>	Development Carbon sink Different resp (3)	Scientific certainty Developed resp Different resp	N/A
		<b>EM</b>	Transformation (2)	Tech	N/A
<b>MoFA</b>	<b>2007</b>	<b>Low carbon</b>	Economic opportunity (2) Low carbon energy (5) Local (2) Market Major emitters (2)	Economic opportunity (6) Low carbon energy (2) Market (2) Participation China resp (2) Major emitters (2)	N/A
		<b>Development</b>	Development (14) Energy consumption Energy mix Carbon sink (2) No cap Ecology (2) Developed resp (7) Different resp (16)	Development (11) Energy consumption No target Adaptation Carbon sink Ecology (2) Developed resp (4) Different resp (8) Diplomacy	N/A
		<b>EM</b>	Economic tools Transformation Tech (4) Surviving (2)	Economic tools	N/A
	<b>2009</b>	<b>Low carbon</b>	N/A	Developing resp	N/A
		<b>Development</b>	Development (14) Energy consumption Energy mix (3) Carbon sink No target (2) Developed resp (15) Different resp (17)	Development (5) No target Developed resp (10) Different resp (7) US resp (3)	No target Different resp
		<b>EM</b>	Carbon intensity (2) Surviving (6)	N/A	N/A
	<b>2015</b>	<b>Low carbon</b>	Economic opportunity (2) Developing resp (5)	Developing resp Major emitters	China resp
		<b>Development</b>	Developed resp Different resp (2)	Development (2) Developed resp Different resp (2)	N/A
		<b>EM</b>	N/A	Surviving	N/A
	<b>2007</b>	<b>Low carbon</b>	Economic opportunity	Economic opportunity (2) Major emitters (4)	N/A
		<b>Development</b>	Development Energy consumption (2) Energy mix (2) Adaptation (2) Carbon sink Research (2) Awareness Developed resp	Development Energy consumption (3) Energy mix (2) No target Adaptation Carbon sink Ecology (3) Research Scientific certainty (2) Developed resp	Scientific certainty Different resp
		<b>EM</b>	Economic tools Transformation Tech (4) Behaviour	Economic tools Tech (6) Surviving	Economic tools
<b>MoST</b>	<b>2009</b>	<b>Low carbon</b>	Economic opportunity	Economic opportunity Local	N/A
		<b>Development</b>	N/A	Development Developed resp	N/A
		<b>EM</b>	Tech (3) Behaviour	N/A	N/A

		Low carbon	Economic opportunity (2)	N/A	N/A
	2015	Development	N/A	N/A	N/A
		EM	N/A	N/A	N/A
		Low carbon	N/A	Low carbon energy	N/A
MEP	2007	Development	Ecology Diplomacy	Development Energy mix Ecology (3) Developed resp	N/A
		EM	N/A	Transformation	N/A
		Low carbon	N/A	China resp (2)	N/A
	2009	Development	Scientific certainty	N/A	N/A
		EM	Economic tools Transformation Carbon intensity Surviving	N/A	N/A
		Low carbon	Economic opportunity (2) Participation	Local	N/A
	2015	Development	N/A	Developed resp (2) Different resp (2)	N/A
		EM	N/A	N/A	N/A
		Low carbon	Low carbon energy	N/A	N/A
	CMA	2007	Development	Development Energy consumption (5) Energy mix (2) Adaption (5) Ecology (7) Research (2) Scientific certainty (3) Uncertainty Awareness (3)	Development (4) Energy mix Adaptation (3) Ecology (8) Research (5) Scientific certainty (6) Developed resp (4) Diplomacy
EM			Tech Surviving (4) Behaviour (3)	Transformation Surviving (3)	N/A
Low carbon			Economic opportunity	Economic opportunity	N/A
2009		Development	Adaptation (2) Ecology (2) Scientific certainty (3) Awareness (2)	Adaption Research	N/A
		EM	Surviving	N/A	N/A
		Low carbon	N/A	N/A	N/A
2015		Development	Adaptation Awareness	Ecology	N/A
		EM	N/A	Surviving (3) Behaviour	N/A
		Low carbon	N/A	Economic opportunity (2) Resilience Developing resp	N/A

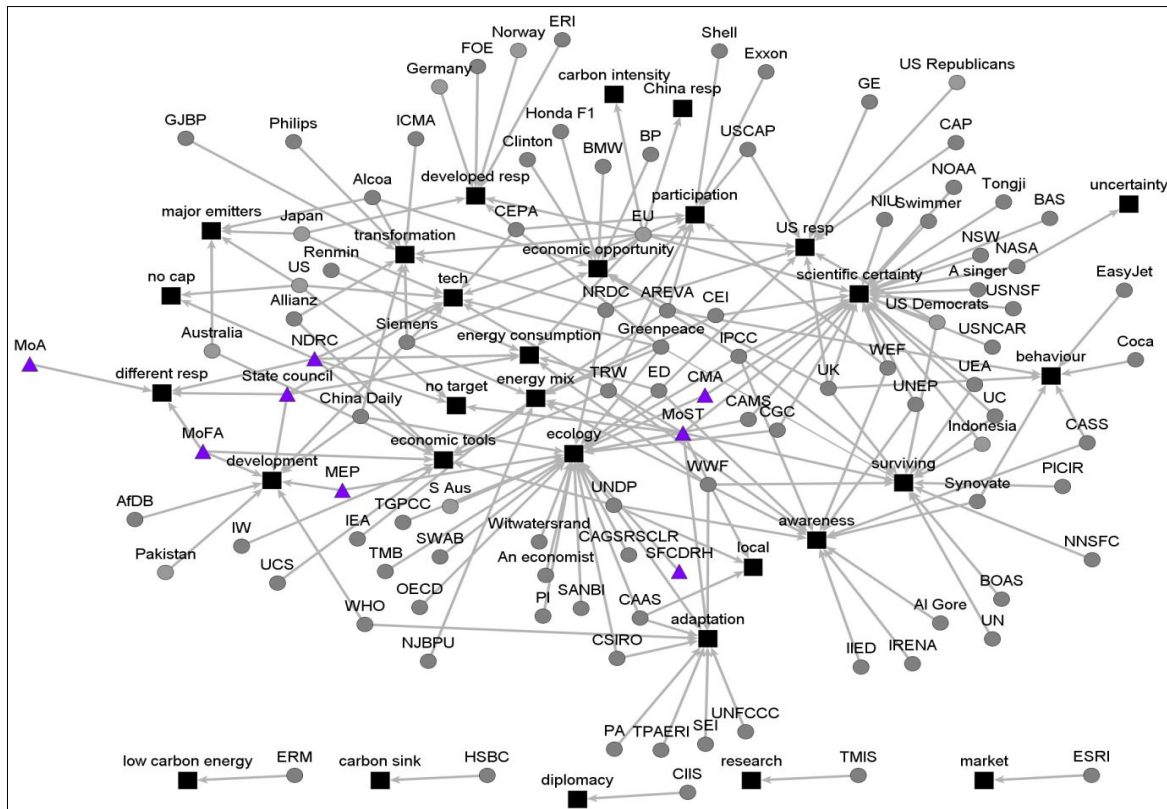
## Appendix D: Climate discourse networks of the newspapers in 2007



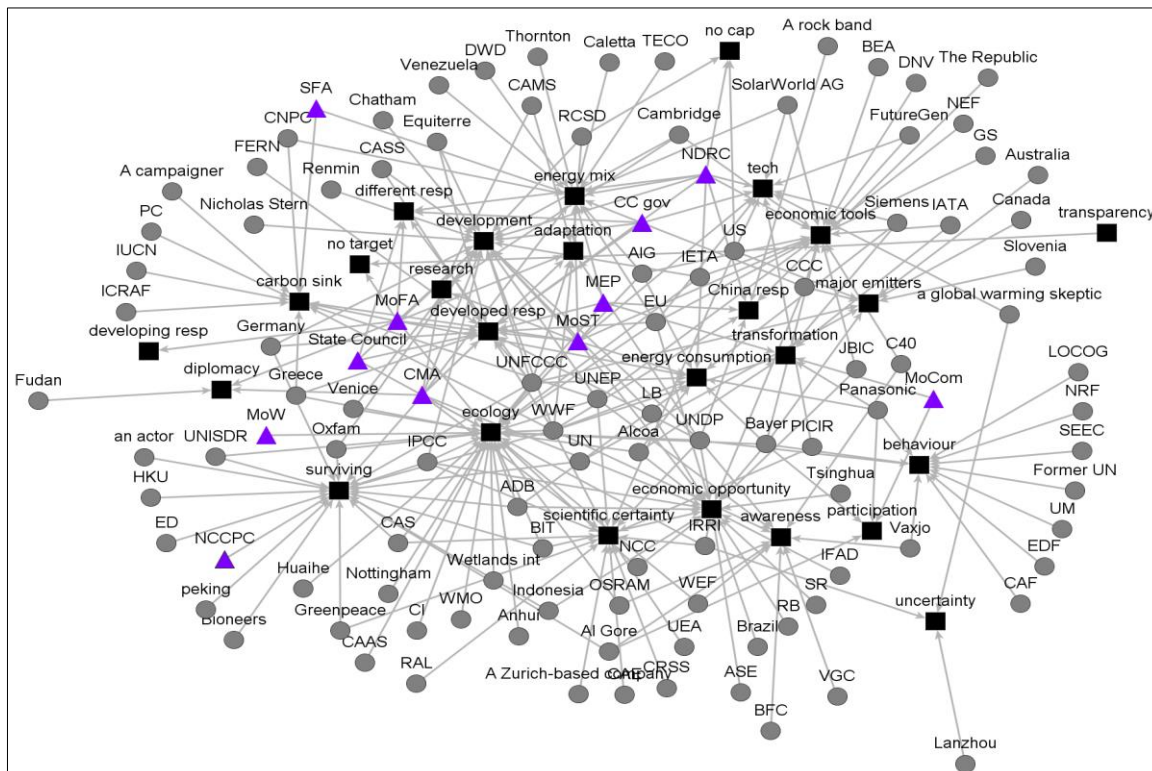
Constructed climate discourse network within the six months before 4<sup>th</sup> June, 2007 in *People's Daily*



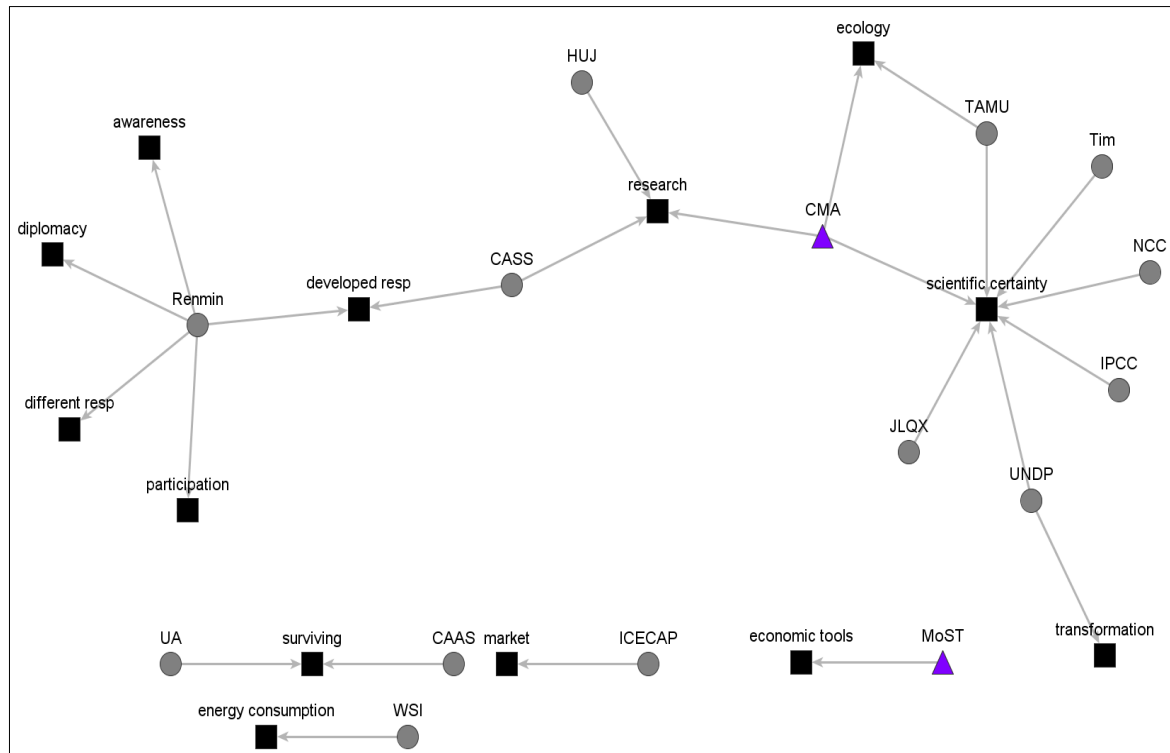
Constructed climate discourse network within the six months after 4<sup>th</sup> June, 2007 in *People's Daily*



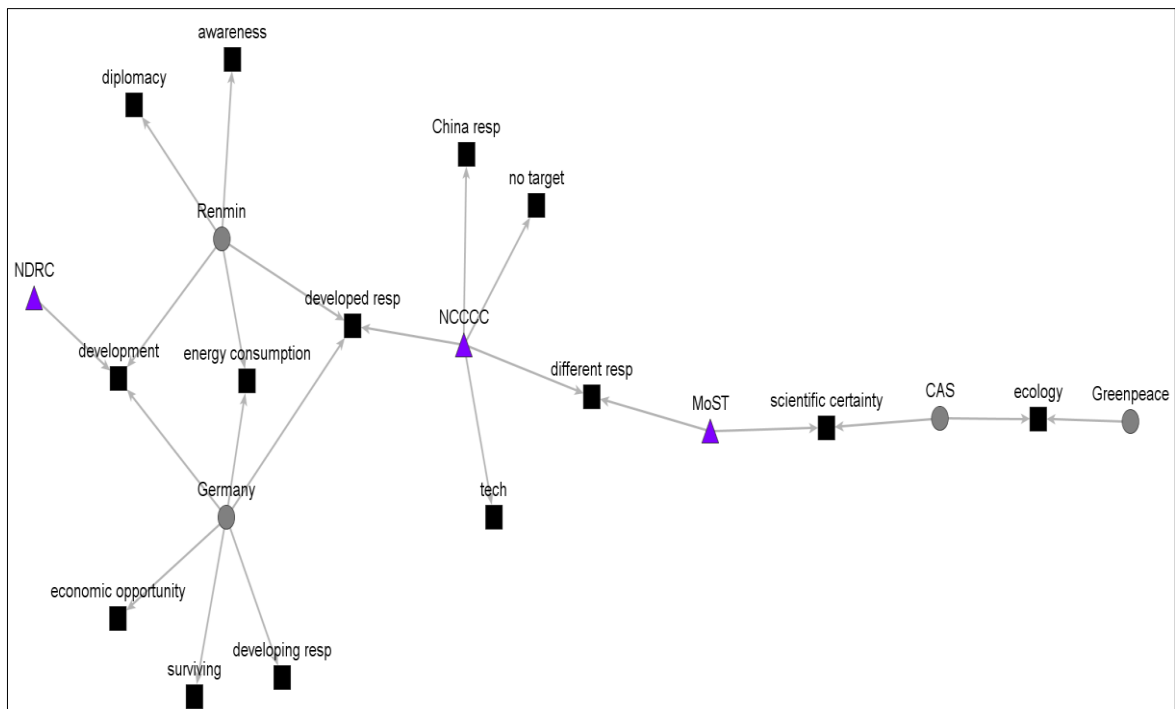
**Constructed climate discourse network within the six months before 4<sup>th</sup> June, 2007 in *China Daily***



**Constructed climate discourse network within the six months after 4<sup>th</sup> June, 2007 in *China Daily***

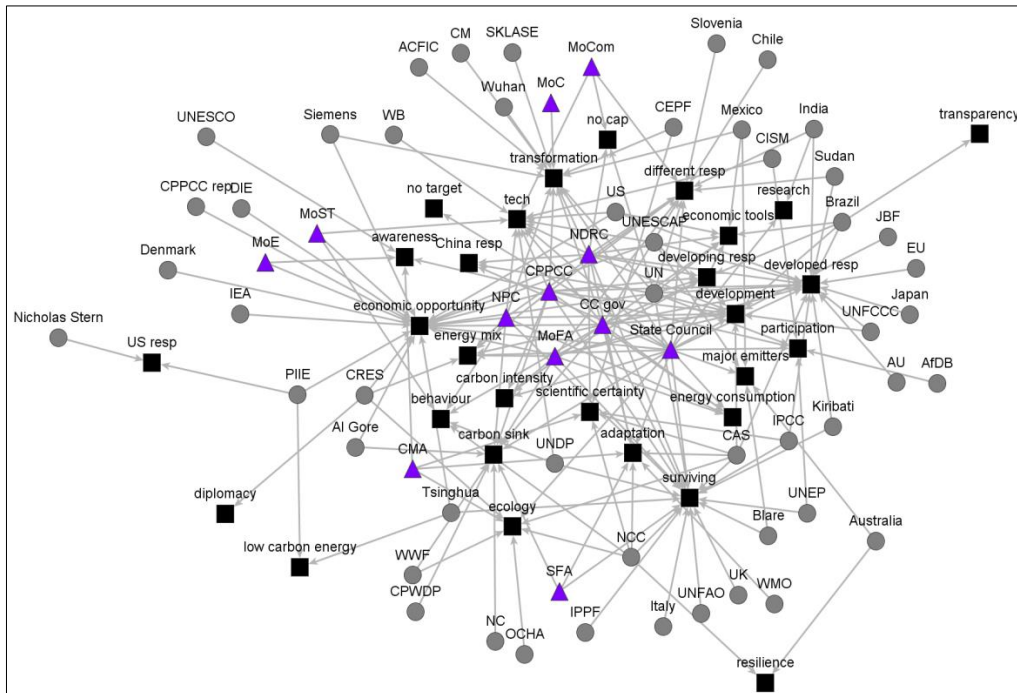


**Constructed climate discourse network within the six months before 4<sup>th</sup> June, 2007 in  
*Southern Weekend***

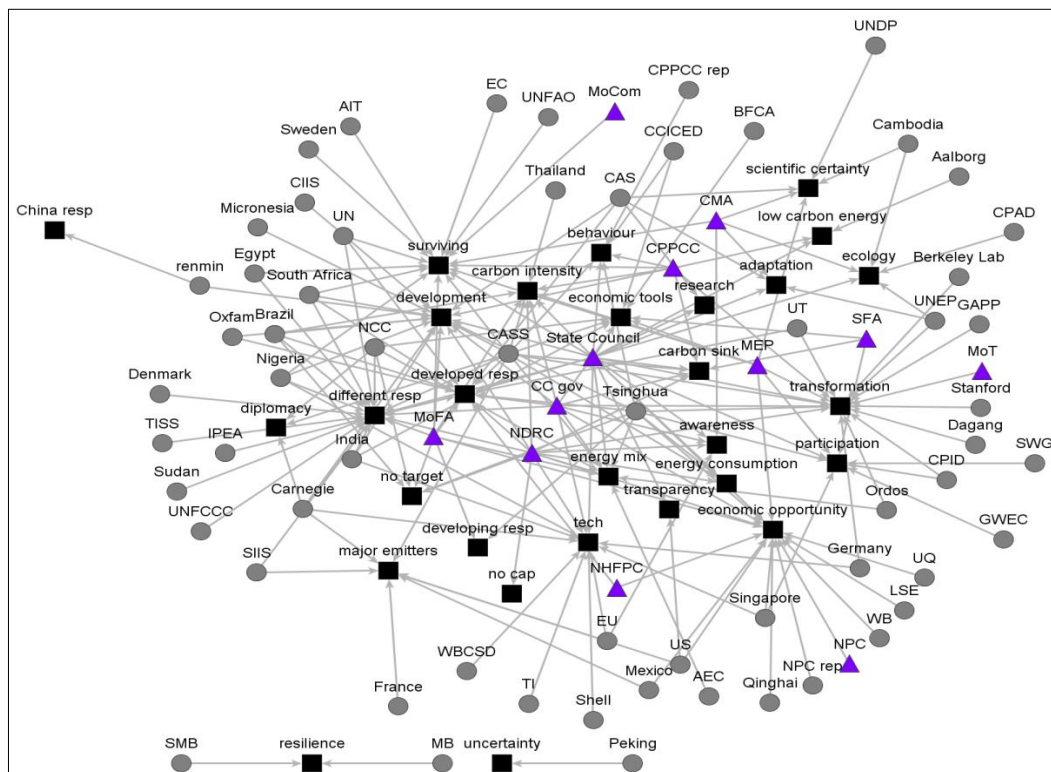


**Constructed climate discourse network within the six months after 4<sup>th</sup> June, 2007 in  
*Southern Weekend***

## Appendix E: Climate discourse networks of the newspapers in 2009

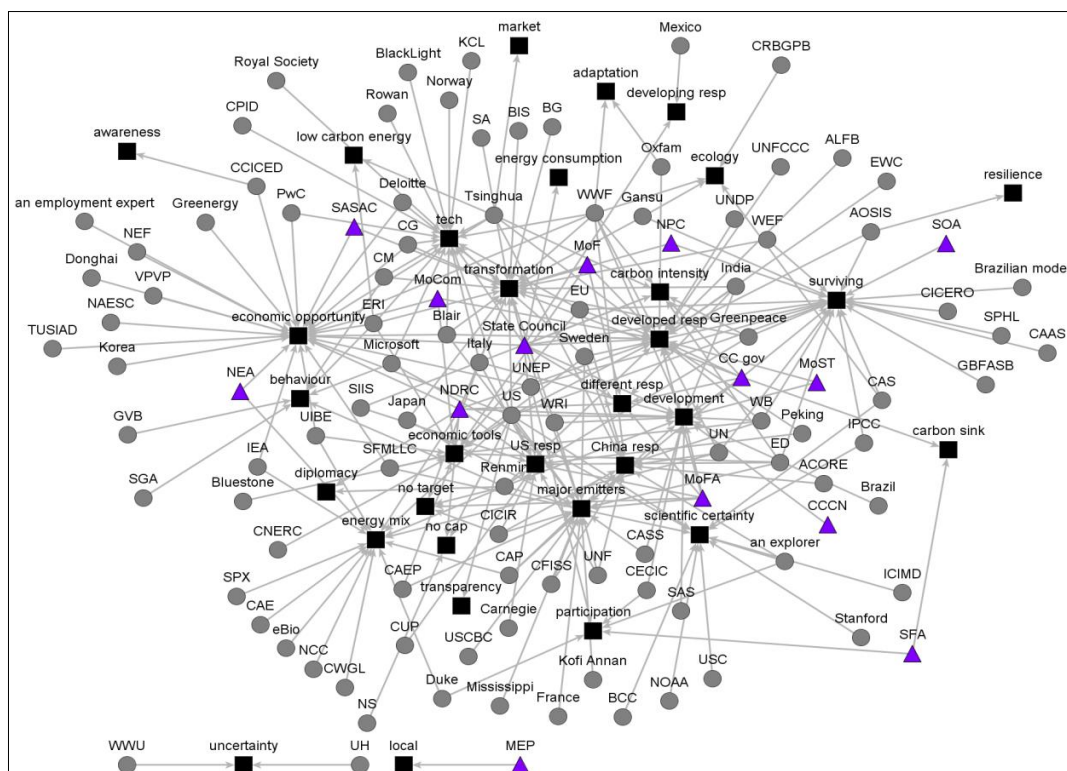


**Constructed climate discourse network within the six months before 26<sup>th</sup> November, 2009 in *People's Daily***

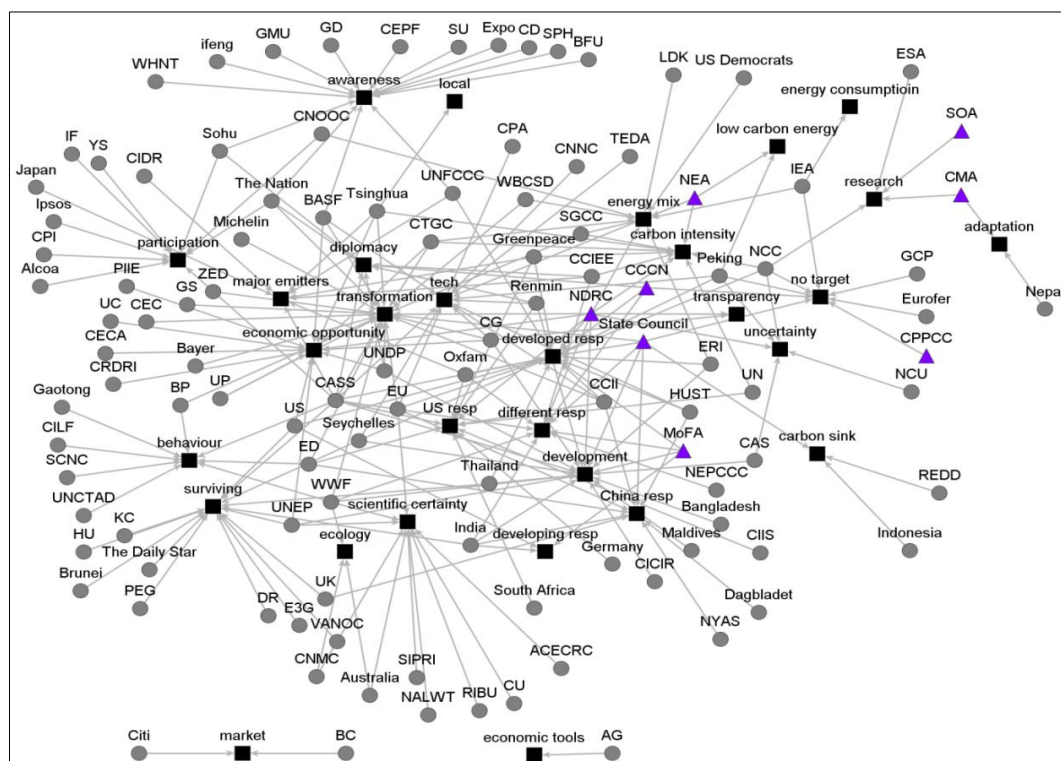


**Constructed climate discourse network within the six months after 26<sup>th</sup> November, 2009 in *People's Daily***



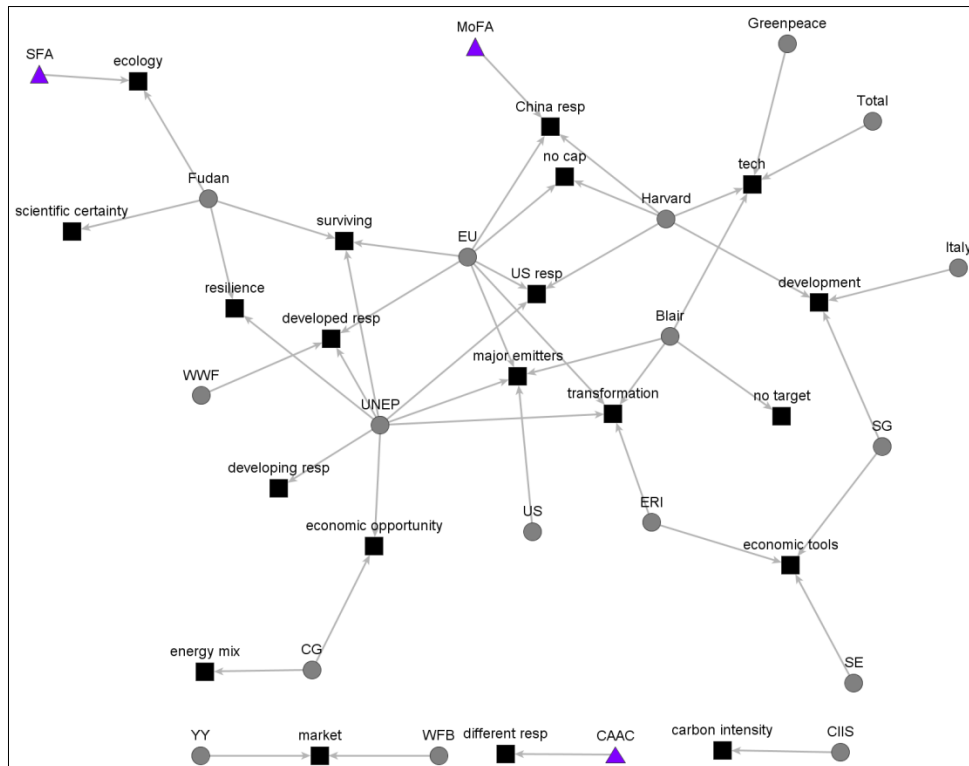


Constructed climate discourse network within the six months before 26<sup>th</sup> November, 2009 in  
*China Daily*

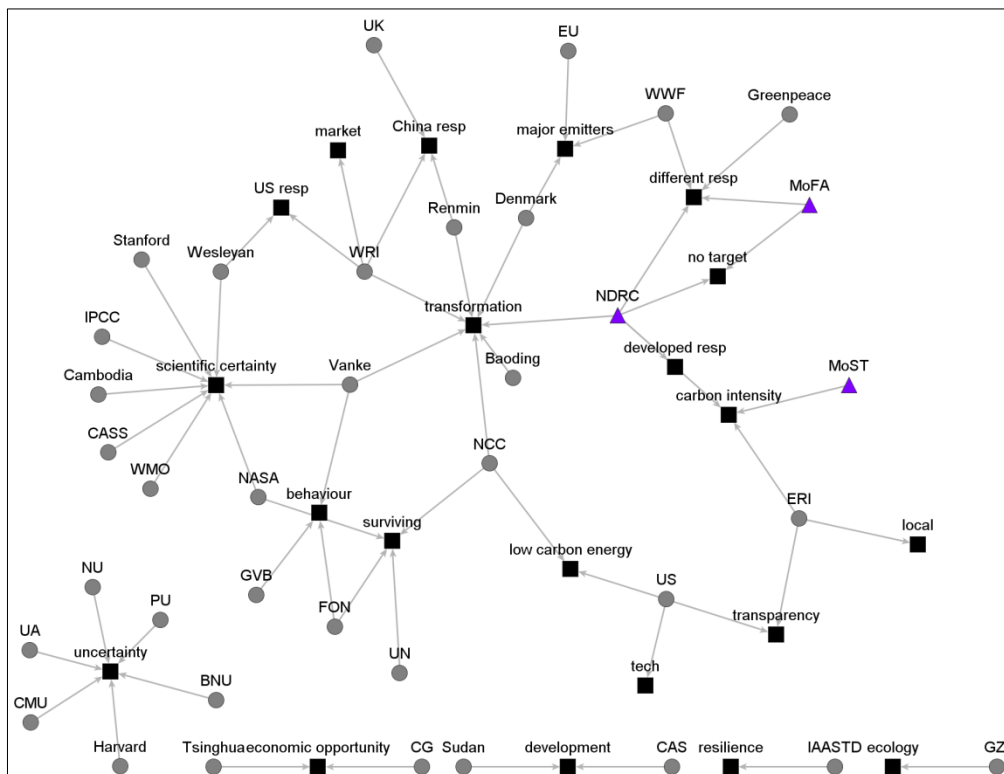


Constructed climate discourse network within the six months after 26<sup>th</sup> November, 2009 in  
*China Daily*



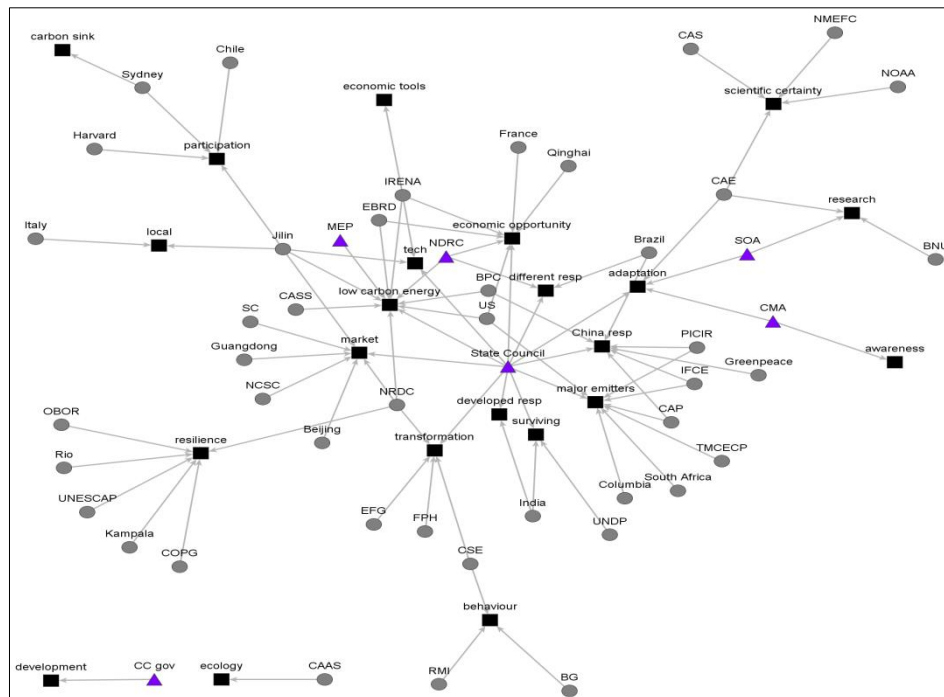


**Constructed climate discourse network within the six months before 26<sup>th</sup> November, 2009 in *Southern Weekend***

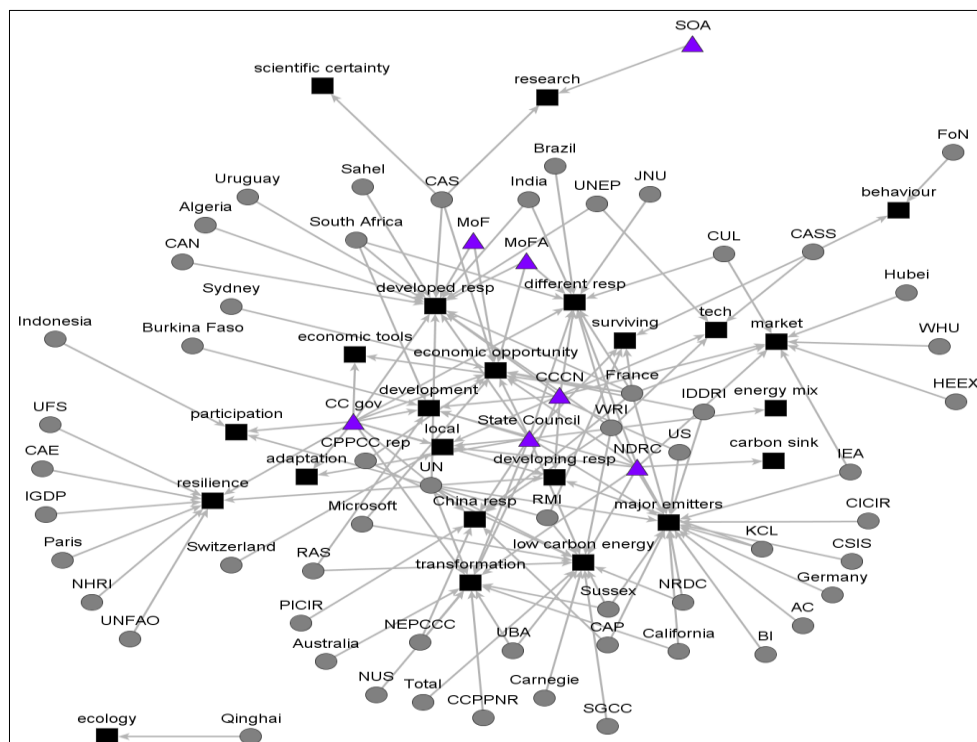


**Constructed climate discourse network within the six months after 26<sup>th</sup> November, 2009 in *Southern Weekend***

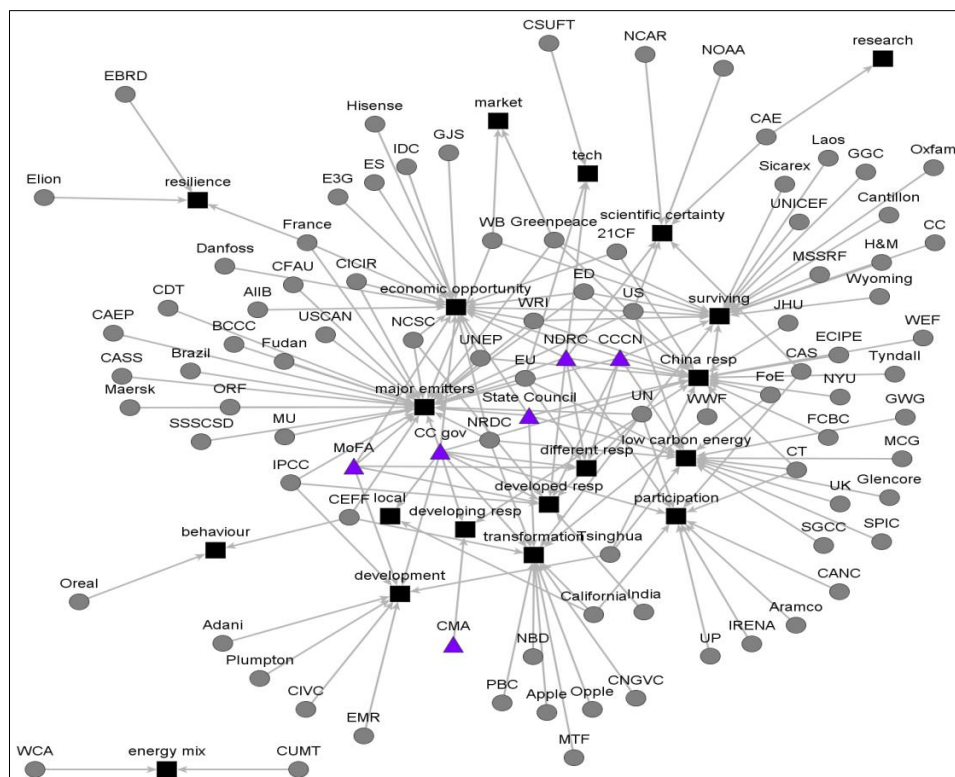
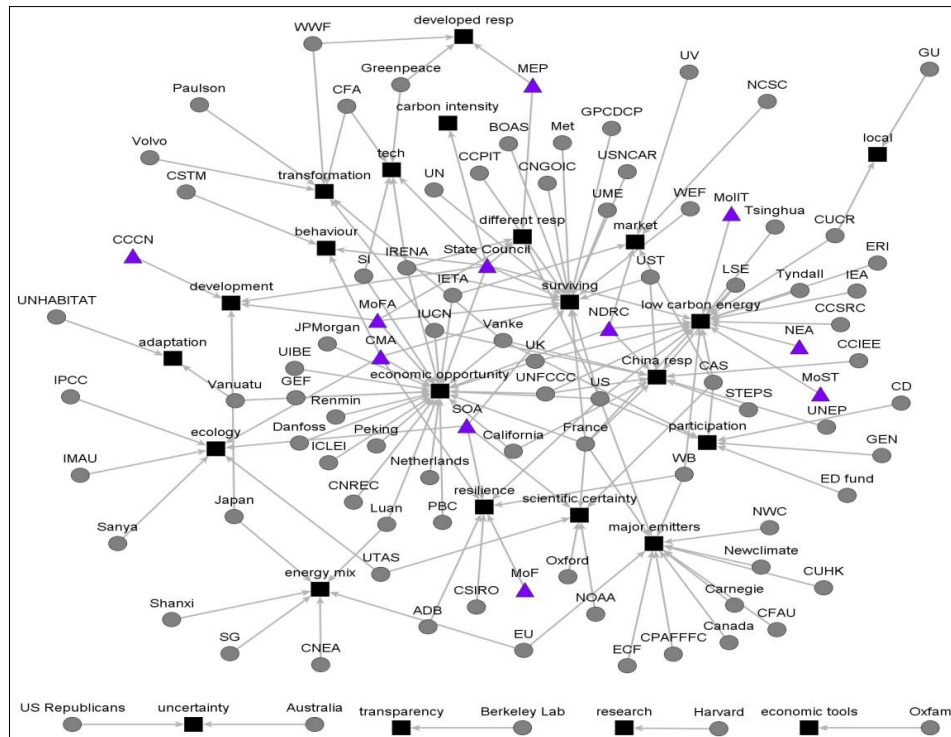
## Appendix F: Climate discourse networks of the newspapers in 2015

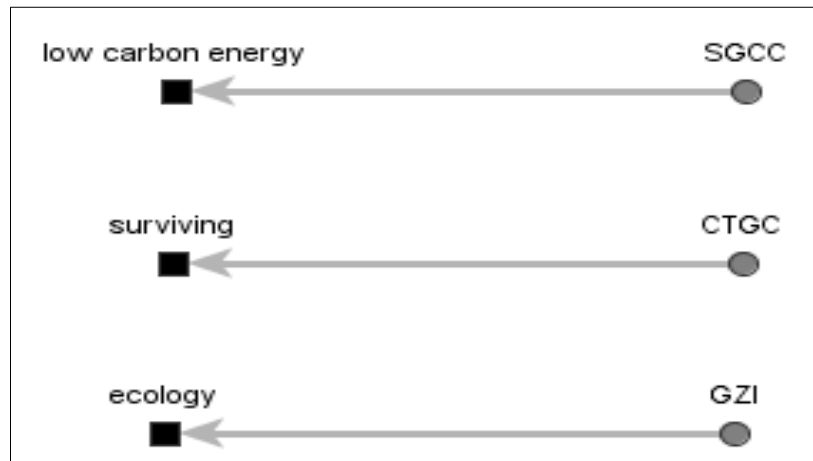


**Constructed climate discourse network within the six months before 30<sup>th</sup> June, 2015 in  
*People's Daily***

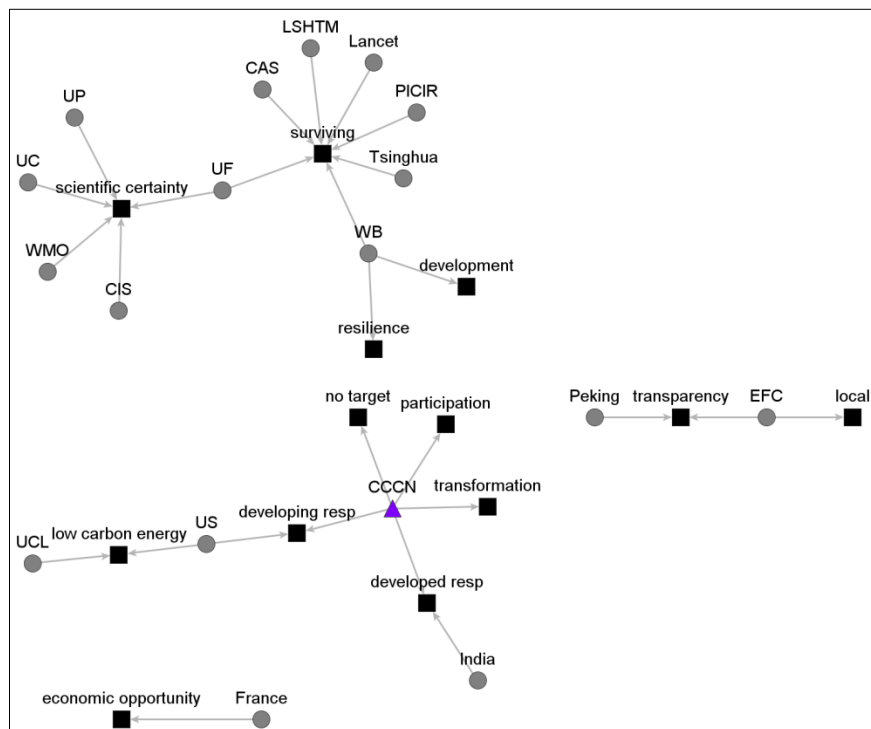


**Constructed climate discourse network within the six months after 30<sup>th</sup> June, 2015 in *People's Daily***





Constructed climate discourse network within the six months before 30<sup>th</sup> June, 2015 in *Southern Weekend*



Constructed climate discourse network within the six months after 30<sup>th</sup> June, 2015 in *Southern Weekend*

## **Appendix G: The list of abbreviations of actors in climate discourse networks**

21CF = 21<sup>st</sup> Century Frontiers in Sweden

Aalborg = Aalborg University

ABB = the Zurich-based power and automation technology group

ABC = Asia Business Council

AC = Asia Centre, Paris, France

ACECRC = the Antarctic Climate & Ecosystems Cooperative Research Centre

ACFIC = All-China Federation of Industry & Commerce

ACORE = American Council on Renewable Energy

Adani = Adani Group (an Indian multinational conglomerate company)

ADB = the Asian Development Bank

AEC = Japan Atomic Energy Commission

AfDB = the African Development Bank

AG = the Australian Industry Group (Ai Group), an industry association in Australia

AIG = American International Group

AIIB = the Asian Infrastructure Investment Bank

AIT = Asian Institute of Technology

ALA = Australian Labour Administration

Alcoa = Alcoa (an American company of lightweight metals technology, engineering and manufacturing)

ALFB = Allbright Law Firm Beijing

Algeria = the government of Algeria

Al Gore = the former US vice-president of the US

An employment expert = an employment expert

An explorer = Borge Ousland

Anhui = the Provincial Government of Anhui, China

AOSIS = the Alliance of Small Island States

APEC = Asia-Pacific Economic Cooperation

Apple = Apple Inc's

Aramco = the Saudi Arabian Oil Company

ARCAM = Amsterdam Centre for Architecture

AREVA = AREVA (energy company)

ASE = Allianz SE

ASM = the American Society for Microbiology

AU = the African Union

Australia = the Australian government

Aus MF= Australian Mining Firms

Aus lab = the Australian Labour Party

Bangladesh = the government of Bangladesh  
 Baoding = the government of Baoding, Hebei Province, China  
 BAS = the British Antarctic Survey  
 BASF = a chemical company  
 Bayer = Bayer  
 BC = Barclays Capital  
 BCC = the Beijing Climate Center  
 BCCC = the Belgian-Chinese Chamber of Commerce  
 BEA = the Barcelona Energy Agency  
 Beijing = the government of Beijing  
 Berkeley Lab = Lawrence Berkeley National Laboratory  
 BES = A Bangladesh environmental specialist  
 BFC = the Brazilian Football Confederation  
 BFCA = Beijing Forestry Carbon Administration  
 BFU = Beijing Forestry University  
 BG = Broad Group (a company)  
 BI = the Brookings Institution  
 BICCS = the Brussels Institute of Contemporary China Studies  
 Bioneers = Bioneers (an environmental group)  
 BIS = the British Invention Show  
 BIT = the Bandung Institute of Technology  
 BlackLight = US-based BlackLight Power (a company)  
 Blair = Tony Blair, the former British Prime Minister  
 Bluestone = Massachusetts-based Bluestone Energy Services Ltd  
 BMB = Beijing Meteorological Bureau  
 BMW = BMW Group  
 BNU = Beijing Normal University  
 BOAS = the Bulletin of the Atomic Scientists (non-governmental organisation)  
 BP = BP  
 BPC = BRICS Policy Center, Rio De Janeiro  
 BRAC = BRAC (non-government micro-financing agency)  
 Brazil = the Brazilian government  
 Brazilian model = Bundchen (a famous Brazilian model)  
 Brunei = the Brunei Times  
 Burkina Faso = the government of Burkina Faso  
 BUSINESSEUROPE = the Confederation of European Business  
 BusinessWeek = BusinessWeek (magazine)  
 C40 = the C40 project (a global network of major cities exchanging ideas on tackling climate change)

CAAC = the Civil Aviation Administration of China

CAAS = the Chinese Academy of Agricultural Science

CAE = the Chinese Academy of Engineering

CAEP = the Chinese Academy for Environmental Planning

CAF = the Canadian Apparel Federation (business association)

CAGRSCLR = the China Aero Geophysical Survey and Remote Sensing Center for Land and Resources

Caletta = the United States-based Caletta Renewable Energy

California = the Government of the State of California, the US

Cambodia = the government of Cambodia

Cambridge = the University of Cambridge

CAMS = the Chinese Academy of Meteorological Sciences

CAN = the Climate Action Network

Canada = the Canadian Government

CANC = the Beijing-based China Association for NGO Cooperation

Cantillon = Cantillon Brewery in Belgium

CAP = the Center for American Progress

CAPD = the China Association for Promoting Democracy

Carnegie = Carnegie Endowment for International Peace

CAS = Chinese Academy of Sciences

CASS = Chinese Academy of Social Sciences

CBC = the Canadian Broadcasting Corporation

CBO = the Congressional Budget Office of the US

CC = Climate Central (a US-based research group)

CCC = London-based Climate Change Capital

CCCN = Chinese special representative for climate change negotiations

CC gov = the Chinese Central Government

CCICED = China Council of International Cooperation on Environment and Development

CCIEE = the China Center for International Economic Exchanges (a think tank)

CCII = China Coal Information Institute

CCPIT = the China Council for the Promotion of International Trade

CCPPNR = China Council for the Promotion of Peaceful National Reunification

CCSRC = the China Coal Strategic Research Center

CCTB = Central Compilation & Translation Bureau

CD = China Daily

CDC = the Centers for Disease Control and Prevention, the US

CDT = the China Dialogue Trust in London

CE = the Canadian Embassy

CEC = China Electricity Council  
CECA = Clean Energy Council of Australia  
CECIC = China Energy Conservation Investment Corp  
CEFF = the China-Europa Forum Foundation  
CEI = Clean Edge Inc  
CEPA = the California Environmental Protection Agency, the United States  
CEPF = China Environmental Protection Foundation  
CFA = the China Funeral Association  
CFAU = China Foreign Affairs University  
CFISS = the China Foundation for International and Strategic Studies  
CG = the Climate Group  
CGC = the China Geological Survey (governmental body)  
Chatham = Chatham House  
Chicago = Chicago University  
Chile = the Chile's government  
CI = Conservation International  
CICERO = the Centre for International Climate and Environmental Research Oslo  
CICIR = the Chinese Institute of Contemporary International Relations  
CIDE = Canadian International Development Agency  
CIDR = China Institute for Development and Reform  
CIIS = the China Institute of the International Studies  
CILF = the China International Lohas Forum  
CIS = the Carnegie Institution for Science  
CISM = China Institute of Strategy & Management  
Citi = Citi (global bank)  
CIVC = the Interprofessional Champagne Wines Committee  
Clinton = former US President  
CM = China Mobile (telecommunications company)  
CMA = the China Meteorological Administration  
CMU = Carnegie Mellon University  
CNEA = the China Nuclear Energy Association  
CNERC = the China National Economic Research Institute  
CNGCV = the California Natural Gas Vehicle Coalition  
CNGOIC = the China National Grain and Oils Information Center  
CNMC = the Cambodian National Mekong Commission  
CNNC = the China National Nuclear Corporation  
CNOOC = China National Offshore Oil Corporation  
CNPC = China National Petroleum Corp  
CNREC = the China National Renewable Energy Center



Coca = Coca Cola  
 Colorado = the Government of Colorado, the US  
 Colorado Uni = the University of Colorado  
 Columbia = Columbia University  
 COPG = the government of Copenhagen, Denmark  
 CPA = the Climate and Pollution Agency, Norway  
 CPAFFC = the Chinese People's Association for Friendship with Foreign Countries  
 CPI = the Climate Policy Initiative (a think tank)  
 CPID = China Power International Development Limited  
 CPPCC = the Chinese People's Political Consultative Conference  
 CPPCC rep = the representative of the Chinese People's Political Consultative Conference  
 CPQTR = the Construction Project of the Qing-Hai Tibet Railway  
 CPWDP = Chinese Peasants and Workers Democratic Party  
 CRBGPB = the Chendgu Research Base of Giant Panda Breeding  
 CRDRI = the China (Hainan) Reform and Development Research Institute  
 CRES = China Renewable Energy Society (non-profit association)  
 CRSS = California's Remote Sensing Systems  
 CSE = the Centre for Science and Environment, India  
 CSIRO = the Commonwealth Scientific & Industrial Research Organisation  
 CSIS = Center for Strategic and International Studies  
 CSTM = China Science and Technology Museum  
 CSUFT = the Central South University of Forestry and Technology  
 CT = the Carbon Trust, the UK  
 CTGC = the China Three Gorges Corporation  
 CU = Copenhagen University  
 CUCR = Center on US-China Relations, Asia Society  
 CUHK = the Chinese University of Hong Kong  
 CUL = Catholic University of Leuven, Belgium  
 CUMT = the China University of Mining and Technology  
 CUP = China University of Petroleum  
 CWGL = China Windpower Group Limited  
 Dagang = Dagang company  
 Dagbladet = Dagbladet (a Norwegian newspaper)  
 Danfoss = Danfoss (a Danish multinational company)  
 Deloitte = Deloitte  
 Denmark = the Danish government  
 DIE = German Development Institute  
 DNSC = the Danish National Space Center

DNV = Det Norske Veritas (a Norwegian company of verification of standards)  
 Donghai = Donghai Securities (a stock exchange company)  
 DR = the National Disaster Reduction Center  
 DRC = the Development Research Center of the State Council  
 Duke = Duke Energy Corp  
 DWD = the German national weather service  
 E3G = Third Generation Environmentalism (environmental consultant)  
 Easyjet = a British low-cost airline company  
 eBio = the European Bioethanol Fuel Association (eBio) in Brussels  
 EBRD = the European Bank for Reconstruction and Development  
 EC = Ecological Club in a school in New Delhi, India  
 ECF = the European Climate Foundation in Brussels  
 ECIPE = the Brussels-based European Centre for International Political Economy  
 ECLA = the Environmental Committee of the London Assembly  
 ED = Environmental Defense (a green group)  
 EDF = EDF energy  
 ED fund = the Environmental Defense Fund  
 EEA = The European Union (EU)'s Environmental Agency  
 EEMP = the Environmental Education Media Project  
 EFC = Energy Foundation China  
 EFG = the Eco Forum Global, Guiyang  
 Egypt = the Egyptian government  
 Elion = Elion Resources Group  
 EMR = East Malling Research, the UK  
 Equiterre = Equiterre (a non-governmental organisation)  
 ERI = the Energy Research Institute, the National Development and Reform Commission  
 ERM = Environmental Resources Management Ltd  
 ES = Essence Securities  
 ESA = the European Space Agency  
 ESRI = the Economic Social Research Institute in Dublin  
 EU = the government of the European Union  
 Eurofer = Eurofer (the European Steel Association)  
 EWC = the East-West Center in Hawaii (a research organisation)  
 EXPO = Shanghai 2010 World Expo Executive Committee  
 Exxon = Exxon Mobil Corp  
 FCBC = the French Chinese Business Club  
 FERN = the Forests and the European Union Resource Network  
 FFB = the French Building Federation

FNI = Norway's Fridtjof Nansen Institute  
FoE = Friends of Earth  
FoN = Friends of Nature  
Former UN = Former UN Secretary-General  
FPH = the Charles Léopold Mayer Foundation for the Progress of Humankind  
France = the French government  
FS = First Solar (semiconductor manufacturing company)  
Fudan = Shanghai's Fudan University  
FutureGen = The FutureGen alliance (business association)  
GABV = Global Alliance for Banking on Values  
Gansu = the Provincial Government of Gansu, China  
Gaotong = Beijing-based Gaotong Law Firm  
GAPP = the General Administration of Press and Publication  
GBFASB = the Global Beverage Fund at Arnhold & S Bleichroeder  
GBN = The California-based Global Business Network  
GCP = the Global Carbon Project  
GD = Guangzhou Daily  
GE = General Electric Co  
GEF = the Global Environment Facility  
GEN = Global Editors Network  
Genoa = Genoa University  
Germany = the German government  
GGC = Global Goals campaign  
GJBP = Green Journey Beijing-Paris  
GJS = Guotai Junan Securities  
Glencore = Glencore plc  
GMU = the George Mason University  
GPCDCP = the Guangdong Provincial Center for Disease Control and Prevention  
Greece = the Greek government  
Greenergy = UK biofuels company Greenergy  
Greenpeace = Greenpeace  
Grenada = the government of Grenada  
GS = Goldman Sachs Group Inc  
GU = Georgetown University  
Guangdong = the Provincial Government of Guangdong, China  
Guardian = the Guardian  
GVB = the Global Village of Beijing  
GWEC = Global Wind Energy Council  
GWG = GWG Energy

GWU = George Washington University  
 GZI = Gansu Zhisha Institute  
 H&M = H&M (clothing retailer company)  
 Harvard = Harvard University  
 HEEX = Hubei Emission Exchange Centre  
 Hisense = Hisense Co., Ltd  
 HK = Hong Kong Special Administrative Region  
 HKU = the University of Hong Kong  
 Honda F1 = Honda Formula One Team  
 HSBC = HSBC Bank  
 HU = Hebei University  
 Huaihe = The Huaihe River Flood Control and Drought Relief  
 Hubei = the Provincial Government of Hubei, China  
 HUJ = the Hebrew University of Jerusalem, Israel  
 HUST = Huazhong University of Science and Technology  
 IAASTD = the International Assessment of Agricultural Knowledge, Science and Technology for Development  
 IAS = Institute of American Studies, Chinese Academy of Social Sciences  
 IATA = the International Air Transport Association  
 ICECAP = the ICECAP Group (business actor)  
 ICIMD = the International Center for Integrated Mountain Development in Nepal  
 ICLEI = the International Council for Local Environmental Initiatives (international organisation)  
 ICMA = the Indonesian Coal Mining Association  
 ICRAF = the Nairobi-based World Agroforestry Centre  
 IDC = International Data Corporation  
 IDDRI = the Institute for Sustainable Development and International Relations  
 IEA = International Energy Agency  
 IETA = International Emissions Trading Association  
 IF = Internet Forest  
 IFAD = the International Fund for Agriculture Development  
 IFCE = International Fund for China's Environment  
 ifeng = ifeng.com (Phoenix Satellite Television Holdings Ltd)  
 IGDP = Innovative Green Development Program  
 IIED = International Institute for Environment and Development  
 IISH = the International Institute for Society and Health  
 IJS = the Institute of Japanese Studies under the Chinese Academy of Social Sciences  
 IMAU = Inner Mongolia Agricultural University  
 India = the Indian government

Indonesia = the government of Indonesia  
IPCC = Intergovernmental Panel on Climate Change  
IPEA = Brazil's Institute for Applied Economic Research  
IPPF = International Planned Parenthood Federation  
Ipsos = Ipsos MORI (market research company in the UK and Ireland)  
IRENA = the International Renewable Energy Agency (international organisation)  
IRRI = the International Rice Research Institute  
Italy = the Italian government  
IUCN = the International Union for Conservation of Nature (international organisation)  
IW = IW Power Co Ltd  
Jamaica = the government of Jamaica  
Japan = the Japanese government  
JBF = Japan Business Federation  
JBIC = Japan Bank for International Cooperation  
JHU = Johns Hopkins University in Washington  
Jilin = the Provincial Government of Jilin, China  
JLQX = the Meteorological Bureau of Jilin Province, China  
JNU = Jawaharlal Nehru University  
JPMorgan = JPMorgan Chase & Co (multinational banking and financial services)  
Kampala = the government of Kampala, Uganda  
KC = Kuensel Corporation (Bhutan)  
KCL = King's College London  
Kiribati = the government of Kiribati  
Kofi Annan = former United Nations secretary-general  
Korea = the government of the Republic of Korea  
Lancet = The Lancet (an academic journal)  
Lanzhou = Lanzhou University  
Laos = the government of Laos  
LB = Lehman Brothers  
LDK = LDK Solar, a solar energy company in China  
LLNL = the Lawrence Livermore National Laboratory in California  
LOCOG = the London Organising Committee of the Olympic and Paralympic Games  
Longzhou = Fujian Longzhou Transportation Co., Ltd  
LSE = London School of Economics and Political Science  
LSHTM = the London School of Hygiene & Tropical Medicine  
LSM = London's Science Museum  
Luan = the Lu'an Group  
Maersk = Maersk (Danish logistics company)  
Maldives = the government of Maldives

Marubeni = Marubeni Research Institute of Japan  
 MB = Mori Building Co., Ltd in Japan  
 MCG = the Mackay Conservation Group  
 Merrill Lynch = Merrill Lynch Wealth Management  
 Met = Met Office, the UK  
 Mexico = the Mexican government  
 Michelin = Michelin (Manufacturing company)  
 Micronesia = the government of the Federated States of Micronesia  
 Microsoft = Microsoft Corporation  
 Mississippi = the government of Mississippi, the US  
 MoA = the Ministry of Agriculture  
 MoC = the Ministry of Construction  
 MoCom = the Ministry of Commerce  
 MoE = the Ministry of Education  
 MoF = the Ministry of Finance  
 MoFA = the Ministry of Foreign Affairs  
 MoIT = the Ministry of Industry and Information Technology  
 MoST = the Ministry of Science and Technology  
 MoT = the Ministry of Transport  
 MoW = the Ministry of Water Resources  
 MSSRF = the M. S. Swaminathan Research Foundation  
 MTF = Makomboki Tea Factory  
 MU = the University of Missouri  
 NAESC = the National Association of Energy Service Companies  
 NALWT = the Northern Australian Land and Water Taskforce, Regional Australia Institute  
 NASA = National Aeronautics and Space Administration  
 NAUM = the National Autonomous University of Mexico  
 NBD = National Business Daily  
 NC = the Washington-based Nature Conservancy  
 NCC = the National Climate Centre  
 NCCCC = the Office of National Coordination Committee on Climate Change  
 NCCPC = the National Congress of the Communist Party of China  
 NCI = Norwegian Climate Institute  
 NCSC = the National Center for Climate Change Strategy and International Cooperation  
 NCU = the National Central University in Taiwan  
 NDRC = National Development and Reform Commission  
 NEA = National Energy Administration

NEF = New Energy Finance

Nepal = the Nepalese government

NEPCCC = National Expert Panel of Combating Climate Change

Netherlands = the government of Netherlands

Newclimate = New Climate Institute in Germany

NHFPC = National Health and Family Planning Commission

NHRI = Nanjing Hydraulic Research Institute

Nicholas Stern = the author of *the Economics of Climate Change*

Nigeria = the Nigerian government

NIU = Northern Illinois University

NJBPU = the New Jersey Board of Public Utilities, the US (foreign government)

NMEFC = National Marine Environment Forecasting Center

NNSFC = the National Natural Science Foundation of China

NOAA = the National Oceanic and Atmospheric Administration, the US

Nordex = Nordex (company)

Norway = the government of Norway

Nottingham = the University of Nottingham

NPC = the National People's Congress

NPC rep = the representative of the NPC

NRDC = the Natural Resources Defense Council (a US environmental NGO)

NRF = the National Retail Federation (the US)

NS = Nucor Steel (the US steel manufacturer)

NSW = New South Wales State, Australia

NU = Nanjing University

NUS = the National University of Singapore

NWC = National War College in Washington

NWH = Northern Westchester Hospital in New York

NY = the Government of New York

NYAS = the New York Academy of Sciences

NYU = New York University

OBOR = the Leading Group for Advancing the Development of One Belt One Road

OCHA = United Nations Office for the Coordination of Humanitarian Affairs

OECD = the Organisation for Economic Cooperation and Development

Opplé = Opplé Lighting Co Ltd

Ordos = the government of Ordos

Oreal = L'Oreal (cosmetics company)

ORF = the Observer Research Foundation (a New Delhi think tank)

OSRAM = OSRAM China Lighting Ltd's

Oxfam = Oxfam

Oxford = the University of Oxford

P&G = Procter & Gamble Co. (leading consumer product company)

PA = Practical Action (non-governmental organisation)

Panasonic = Panasonic Corp

Paris = the government of Paris, France

Paulson = the Paulson Institute

PBC = the People's Bank of China

PC = Point Carbon Energy Research

PEG = The US-based Pew Environment Group

Peking = the Peking University

Philips = Philips Lighting East Asia

PI = the Pacific Institute in Oakland

PICIR = the Potsdam Institute for Climate Impact Research

PIIE = the Peterson Institute for International Economics

Plumpton = Plumpton College, the UK

PRIC = the Polar Research Institute of China

PU = Princeton University

PwC = PricewaterhouseCoopers (a multinational professional services network) headquartered in London, United Kingdom.

Qinghai = the Provincial Government of Qinghai, China

Qumalai = Qumalai County, Qinghai Province, China

RAL = the Rutherford Appleton Laboratory

RAS = Russian Academy of Sciences

RB = Roland Berger (a leading international consulting firm)

RCCU = the Research Center of Catholic University

RCSD = the Research Center for Sustainable Development, the Chinese Academy of Social Sciences

RD = Royal Dutch

REDD = the United Nations - Reduced Emissions from Deforestation and Degradation (REDD) Programme

Renmin = the Renmin University of China

RIBU = the Rhode Island's Brown University

Rio = the government of Rio de Janeiro, Brazil

RMI = Rocky Mountain Institute

Rowan = New Jersey-based Rowan University

Royal Society = The Royal Society (the UK national academy of science)

RRA = Ricardo Rouvier & Associates (a consulting company)

SA = Scandinavian Airlines

SADC = Southern African Development Community

Sahel = SOS Sahel International UK



SANBI = the South African National Biodiversity Institute  
 Sanya = the government of Sanya, Hainan Province, China  
 SAS = South Asia studies expert at the Chinese Academy of Social Sciences  
 SASAC = State-owned Assets Supervision and Administration Commission  
 SASII = South Africa Scientific and Industrial Institute  
 S Aus = the South Australia State (foreign government)  
 SC = SinoCarbon Innovation & Investment Co.,Ltd  
 SCCC = Sichuan Climate Centre  
 SCNC = the Shanshui Center for Natural Conservation  
 SE = Stockholm Environment Institute  
 SEEC = the Sustainable Energy Europe Campaign  
 SEI = Shanghai Engineering Institute  
 Seychelles = the government of Seychelles  
 SFA = the State Forestry Administration  
 SFCDRH = the State Flood Control and Draught Relief Headquarters  
 SFMLLC = Soros Fund Management LLC  
 SG = Shenhua Group (coal mining company)  
 SGA = Smart Growth America (an organisation)  
 SGCC = State Grid Corp of China  
 Shanghai = the government of Shanghai, China  
 Shanxi = the government of Shanxi, China  
 Shell = Shell Group  
 SI = Solar Impulse (a Swiss long-range experimental solar-powered aircraft project)  
 Sicarex = Sicarex (a research centre of winemaker in France)  
 Siemens = Siemens (a Germany company)  
 Sierra Leone = the Government of Sierra Leone  
 SIIS = the Shanghai Institute for International Studies  
 Singapore = the Singaporean government  
 SIPRI = the Stockholm International Peace Research Institute  
 SKLASE = State Key Laboratory of Automotive Safety and Energy  
 Slovenia = Slovenian government  
 SLR = SLR Consulting  
 SMB = Shanghai Meteorological Bureau  
 SOA = the State Oceanic Administration  
 Sohu = Sohu (Chinese Internet company)  
 SolarWorld AG = SolarWorld AG (manufacturer and supplier of high quality photovoltaic products)  
 South Africa = the South African government  
 Spain = the government of Spain

SPH = Singapore Press Holdings

SPHL = Suntech Power Holdings Ltd

SPIC = State Power Investment Corp

SPX = US-based SPX Corporation

SR = Swiss Reinsurance Company Ltd (reinsurance company based in Zurich, Switzerland)

SSSCSD = the South-South Steering Committee for Sustainable Development

Stanford = Stanford University

State Council = the State Council of People's Republic of China

STEPS = the ESRC STEPS Centre (Social, Technological and Environmental Pathways to Sustainability)

SU = Shandong University

Sudan = the government of Sudan

Sussex= the University of Sussex

SWAB = Shanghai Water Administration Bureau

Sweden = the government of Sweden

SWG = Shanghai Wanxing Group (real estate company)

Switzerland = the government of Switzerland

Sydney = the University of Sydney

Synovate = Synovate (market research company)

TAMU = Texas A&M University, the US

TECO = Florida-based TECO Energy

TEDA = the Administrative Committee of Tianjin Economic-Technological Development Area (TEDA)

TGPCC = the Three Gorges Project Construction Committee

Thailand = the Thai government

The CCC = the Committee on Climate Change

The Daily Star = The Daily Star (a newspaper from Bangladesh)

The Nation = The Nation (a leading media group in Thailand.)nasa

The Republic = The Republic (an Italian newspaper)

Thornton = Thornton Group Asia

TI = the Times of India

Tim = Tim Flannery (a scientist)

TISS = Tata Institute of Social Sciences of India

TMB = Tibet meteorological bureau.

TMCECP = the Tsinghua-MIT China Energy and Climate Project

TMIS = the Tianjin marine information service

Tongji = Tongji University

Total = Total S.A. (oil and gas company)

TPAERI = the Tibetan Plateau Atmospheric Environment Research Institute

TRW = TRW Automotive Components Co Ltd  
 Tsinghua = Tsinghua University  
 TUSIAD = the Turkish Industrialists' and Businessmen's Association  
 Tyndall = the Tyndall Centre for Climate Change Research UA, the University of Adelaide, Australia  
 UA = the University of Alabama, US  
 UBA = German Environment Agency  
 UC = the University of California  
 UCA = the University of Canberra in Australia  
 UCCEF = the US-China Clean Energy Forum  
 UCL = University College London  
 UCS = the Union of Concerned Scientists  
 UCT = the University of Cape Town, South Africa  
 UEA = the University of East Anglia  
 UF = the University of Florida  
 UFS = the University of the Free State  
 UH = the University of Hawaii  
 UIBE = the University of International Business and Economics  
 UK = the UK government  
 UKNT = the National Trust, the UK  
 UM = the University of Maryland  
 UME = the University of Melbourne  
 UMP = the Union for a Popular Movement (a French political party)  
 UN = the United Nations  
 UNCTAD = the United Nations Conference on Trade and Development  
 UNDP = the United Nations Development Programme  
 UNEP = the United Nations Environment Programme  
 UNESCAP = the United Nations Economic and Social Commission for Asia and the Pacific  
 UNESCO = the United Nations Educational, Scientific and Cultural Organization  
 UNF = the United Nations Foundation  
 UNFAO = the UN Food and Agriculture Organisation  
 UNFCCC = the United Nations Framework Convention on Climate Change  
 UNHDP = the UN Human Development Programme  
 UNICEF = the United Nations International Children's Emergency Fund  
 UNISDR = the UN International Strategy for Disaster Reduction  
 UNWTO = the World Tourism Organization  
 UP = the University of Pennsylvania  
 UQ = the University of Queensland

Uruguay = the government of Uruguay

US = the US government

USC = the University of South Carolina

USCAN = the US Climate Action Network

USCAP = the US Climate Action Partnership (an alliance of commercial and environmental organisations)

USCBC = US-China Business Council

USCM = the United States Conference of Mayors

US Democrats = the US Democratic Party

USGS = the US Geological Survey

USNCAR = the US National Center for Atmospheric Research

USNSF = the US National Science Foundation

USNSIDC = the US National Snow and Ice Data Center

US Republicans = the US Republican Party

UST = the University of St Thomas

UT = the University of Tokyo

UTA = the University of Texas at Austin

UTAS = the University of Tasmania

UV = Victoria University

Vanke = China Vanke Co Ltd

VANOC = the Vancouver Organizing Committee for the 2010 Olympic and Paralympic Winter Games

Vanuatu = the government of Vanuatu

Vaxjo = Vaxjo, Sweden

Venezuela = Venezuelan Government

Venice = Venice government

VGC = Volkswagen Group China

Virgin = UK-based Virgin

Volvo = The Volvo Group

VPVP = Vantage Point Venture Partners

Wal-Mart = the US retailing giant

WB = the World Bank

WBCSD = the World Business Council for Sustainable Development

WCA = the London-based World Coal Association

WDM = the World Development Movement

Weather net = Weather Net of China

WEF = the World Economic Forum

Wesleyan = Wesleyan University, US

Wetlands Int = Wetlands International

WFB = Wenzhou Forestry Bureau  
WHNT = WHNT TV in Huntsville, Alabama, the US  
WHO = World Health Organization  
WHU = Wuhan University  
WI = the Wuppertal Institute's Berlin office  
Witwatersrand = South Africa's University of Witwatersrand  
WMO = the UN's World Meteorological Organization  
WRI = World Resources Institute  
WSI = the World Security Institute  
WU = Wageningen University, Netherlands  
Wuhan = the government of Wuhan, Hubei Province, China  
Wuwei = the government of Wuwei, Gansu Province, China  
WWF = World Wide Fund for Nature  
WWU = Western Washington University  
Wyoming = the University of Wyoming  
Xinhua = Xinhua News Agency  
YCJYJT = Hubei Yichang Transportation Company  
YS = Yomiuri Shimbun (a Japanese newspaper)  
YY = Yongjia Yuanye Gardens Engineering Co.,Ltd, Wenzhou, China  
ZED = the Zero Fossil Energy Development (ZED) project